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SOUTHERN PIG-IRON OUTPUT.

THOUGH the country had a record production of pig-iron in 1914, with an output of 30,966,301 tons, the South's output was just about its output of 1903. The output in seven Southern States in 1913 was 3,285,957 tons, divided among the States and compared with the 1912 output as follows:

States.	1912.	1913.
Alabama	1,862,681	2,057,911
Kentucky	68,760	*
Maryland	219,546	289,959
Tennessee	338,238	280,541
Virginia	256,167	341,815
West Virginia.....	274,360	1315,731

Total..... 3,019,752 3,285,957
United States..... 29,726,937 30,966,301

*Included with West Virginia. †Including Kentucky and Mississippi.

The increase in the seven States over 1912 was 265,205 tons, or at the rate of 8.8 per cent., while the increase in the rest of the country was 973,159 tons, or at the rate of 3.7 per cent. The increase in Alabama was 195,230 tons, which was equal to nearly 70 per cent. of the total increase in the South, and there were increases of 85,648 tons in Virginia and of 70,413 tons in Maryland, with some increase in Kentucky, while Mississippi made its appearance for the first time in many years statistically in pig-iron production. There were decreases in Tennessee and West Virginia, and no production in Georgia and Texas. In spite of the greater rate of increase in production in the South in 1913 over 1912 in comparison with the rest of the country, the South's output was less by more than 200,000 tons than its highest record, that of 1906. Several factors have contributed to the failure of the South to maintain the rate of progress in pig-iron production that made it notable 25 or 30 years ago. But there is every reason why the present situation should be changed. The section can produce pig-iron. That is indisputable. It can operate successfully industries depending upon pig-iron as their basis. It is already turning out more than 150 different kinds of products into which iron or steel enter. It is learning rapidly the wisdom of doing all its manufacturing at home instead of being content to handle primary products only. In its diversified iron and steel industries scattered among its 16 States, and ranging from the manufacture of locomotives and cars and rails to wirework, stoves and plumbers' supplies, it has incentive to expand and increase in this field. Modification of trade routes consequent upon the opening of the Panama Canal and greater opportunities in foreign markets may tend to increase the diversification in the iron and steel industries in the South. But the great hope in that respect is in the building up of the home markets in that section for finished products of the industries.

PANAMA CANAL TOLLS.

IN July, 1912, when the Congress was acting upon the provisions for the operation of the Panama Canal, and the international morality of exempting from canal tolls vessels engaged in the coastwise trade of the United States was questioned, the MANUFACTURERS RECORD suggested the following amendment to the bill:

No tolls shall be levied upon vessels engaged exclusively in the coastwise trade of their respective countries, or upon vessels of any country engaged in foreign trade if the owners of such vessels agree that said vessels may be taken and used by the United States in time of war or other public emergency, in the discretion of the President, upon payment to the owners of the fair actual value of said vessels at the time of the taking; provided that said owners shall deposit with The Hague Tribunal a certificate of such agreement endorsed by the governments of their respective countries; and, provided further, that vessels owned or controlled by railroads or any other land transportation agency or agencies shall not be permitted to share in such agreement.

Objection to the relief of coastwise vessels of the United States from the tolls was based upon the provisions in the Hay-Pauncefote treaty that there "shall be no discrimination against any such nation or its citizens or subjects in respect of the conditions or charges of traffic or otherwise." We felt at the time that freeing vessels of any country engaged in its coastwise trade from tolls would honorably and justly remove the objection that discrimination in favor of coastwise vessels of the United States was made. We recognized, of course, that this non-discriminating provision would be of no advantage to vessels engaged in the coastwise trade of any foreign country save, perhaps, Canada, but we regarded that as the misfortune of the coastwise vessels of other countries and not the fault of the coastwise vessels of the United States, given opportunity by the canal to extend their traffic between the east coast and west coast of the country.

On another page of this issue of the MANUFACTURERS RECORD is an article by D. A. Tompkins of Charlotte, N. C., reproduced from the *Observer* of that city, making some suggestions about Panama Canal tolls which are worthy of full consideration, now that the question has been revived at Washington. A few points in addition should be emphasized in this connection.

There is quite a suspicion, when are considered all the circumstances of the Spanish War, the suppression of the Boers in South Africa and the "siege of Pekin," that for quite a period in the last few years of the nineteenth century and the first few years of the twentieth century, including the time of the framing of the Hay-Pauncefote treaty, the American State Department was largely a branch of the British foreign office. Pauncefote became a Lord because of his astuteness in handling such a situation. It is hard to believe that he was not better acquainted than John Hay with the scope of the canal treaty, as it is also hard to believe that Great Britain has ever been inspired by morality of a higher order than Pecksniff's in framing any treaty or in using any other country, even the United States, as its cat's paw. Chagrin at a realization that British diplomacy outwitted us in the treaty dealing with the canal, expected by Great Britain to benefit Great Britain more than any other country, including the United States, must not permit us to break our agreement after we have discovered that it is to our disadvantage. We must abide by it until we can change it by proper methods. The processes by which we were enabled to undertake the building of the canal were disgraceful enough to serve for all time. Nevertheless, abiding by the treaty by no means implies that we must read into the treaty, or permit Great Britain to read into it,

provisions for the advantage of the British Government or of British investors in American railroads or other transportation interests that were not contemplated in the framing of the treaty. We believe that the objection to freeing from canal tolls vessels engaged in the coastwise trade of the United States can hardly be sustained by the treaty provisions. But we feel confident that the inclusion in such freedom of vessels engaged in the coastwise trade of any nation would leave not the slightest basis in justice for a charge that we had violated the provisions against discrimination.

THE DEMAND FOR AMENDMENT OF THE INCOME TAX LAW.

IT is hoped that United States Senator Gallinger of New Hampshire will not seek to press his proposed amendment providing that one-half of the Federal income tax collected in each State shall be turned over to that State for such uses as the State authorities may prescribe. In ratifying the sixteenth amendment to the Constitution permitting an income tax to be levied without apportionment among the States the States relinquished a most valuable and powerful right. It is doubtful whether the amendment would have been ratified had the people of the States in electing members of their respective Legislatures known that such bodies would be called on to ratify the amendment and had understood its scope. Certain it is that the amendment will not be repealed, and equally certain it is that under present auspices of legislation at Washington, which confessedly incorporated the income tax measure in the tariff bill for the purpose of overcoming an expected deficit in revenue from the tariff, no inroads upon income tax revenue for the use of the States will be permitted. It is worse than a waste of time and energy, therefore, to attempt the impossible in the face of an increasing public opinion that will compel possible amendments of the income tax measure unless, in the meantime, the courts shall be called upon to handle properly the measure reeking with unconstitutionality, illegality and injustice.

The main obstacle in the way of amendments is, of course, the unwillingness on the part of legislators at Washington to acknowledge that a measure vociferously heralded as the first great constructive piece of legislation in the United States in the twentieth century is the most imperfect piece of legislative construction that has been foisted upon the country in fifty years. Refusal to acknowledge does not nullify the fact, however—a fact emphasized by every attempt of a person whose income is subject to the tax to meet the shifting regulations of the Internal Revenue Office, based upon manifest unfitness to clarify the impossibilities of the provisions of the law itself. But refusal to permit reasonable amendments absolutely essential to the just and simple working of the law should not deter any man, whether taxable or not, but keen for intelligence and righteousness in Government, from insisting at every turn that the amendments shall be made.

Nor should the demand for amendment be suppressed by fear lest reopening legislation will give opportunity for making it more drastic upon the special class lines upon which it was originally framed. The courts may be depended upon to counteract that policy, and the courts are hardly to be cowed by the threat that has been made to the effect that decision adverse to the income tax law will be followed by legislation seeking to bind future action by the courts on the subject or changing the tenure of office of the judges.

The essential changes were called for at the time when the income tax measure was being rushed through the Congress by methods strikingly illustrating the bane of substituting in National legislation the rule of a party caucus for representative Government under the Constitution. Four months' experience with the law has more than justified the earlier criticisms of certain of its provisions and has assembled and concentrated the opposition to them. The required amendments must provide—

Substitution for the policy of withholding the tax at the source of income the principle of information by the source of payment of taxable income.

Discrimination among personal, individual business and corporation incomes, and among incomes from investment of physical or mental capital, or of both, from investment of money capital alone, and from investment of active capital of money and mind or of money, mind and muscle in combination.

Removal of the proviso in paragraph C relating to the "aggregate income" of husband and wife, so as to bring that paragraph into conformity with the intent of the law to tax the individual income.

Limitation to the minimum of the power of the Internal Revenue Office to interpret the provisions of the law, and, if possible, assurance of freedom from any possible connection with the administration of the law of demonstrated disqualification for the task.

With such amendments in mind, the duty of recasting the measure should be entrusted to someone having knowledge of the meaning of words and, at least, rudimentary acquaintance with the rules of English syntax, the fundamental principles of law and the elements of constitutional government.

These changes will make it possible for the income tax law to be placed beyond the range of judicial action, although its undemocratic plan of application to a limited number of incomes will still render it liable to judgment by the people of the United States when they awaken from their forward-gazing to a practical realization of the dangers to the people in any such undemocratic policy. For the precedent set in one case can be used to vex its devisers and supporters in other cases.

Conceived in disregard of fundamental principles of law and in apparent conviction that the sixteenth amendment to the Constitution had virtually nullified the rest of the Constitution; brought forth in haste, heedless of protests from experience and knowledge, and swaddled in the patter that freshmen in even third-class law schools acquire readily, but which attorneys-at-law are discarding more and more, the natural muddle of the Federal income tax law, intensified by the form of the regulations, does not conceal its dominant thought, a flagrant appeal to mass against class.

But, in training a long-range columbiad against what superheated and narrowed imaginations pictured as behemoths, there was too dense ignorance of practical business affairs to realize that many, many house sparrows would suffer.

Presently the mass will be startled into appreciation of the fact that its lawmakers have misjudged and misled it.

MARYLAND'S OYSTER INDUSTRY MENACED.

MORE than twenty years ago Dr. William K. Brooks of the Johns Hopkins University pointed out as a result of a special investigation that the Chesapeake Bay of Maryland and Virginia receives the drainage of more than 40,000,000 acres of farm lands in New York, Pennsylvania, Maryland and Virginia, which deposits all over the bottom of the bay, likened to a great river valley, a rich alluvium containing an endless variety of microscopic plants and animals furnishing the best kind of food for oysters. Once upon a time this great bay was the center of the oyster industry of the country, and more than 400,000,000 bushels of oysters have been taken from it, for the most part, without a thought that the supply could ever be exhausted. In recent years there has been a marked decline in the Maryland oyster output in consequence of such a short-sighted policy, the annual catch having been reduced between 1880 and 1908 from 10,000,000 bushels, valued at \$4,730,000, to 6,232,000 bushels,

valued at \$2,228,000, while the 1912 catch was only 5,510,000 bushels, valued at \$2,128,000. Wisdom has sought to counteract this waste of opportunities for maintaining and enlarging the source of the most valuable food supply and the basis of industries employing thousands of persons by providing for oyster planting by individuals under State auspices. This has, of course, not met with the approval of small politicians, and the agitation against it has come to a head in efforts in the Maryland Legislature to destroy the work of years for practical and profitable building up of the oyster industry to the benefit not only of the individual planters, but of everybody concerned. Success of these efforts will spell ruin for an industry that ought to yield annually a handsome revenue to the State and bring returns of from \$15,000,000 to \$20,000,000 to the oystermen.

SAFETY AND SANITATION.

EVERYONE must be in sympathy with the spirit of the slogan, "Safety first," which we hear so much now with reference to railroad operation, but if anyone expects that all railroad employees will be reformed to an equal degree of prudence and forethought through the pushing of the campaign for greater safety he or she will be grievously disappointed. This remark is apropos of some of the utterances of writers and speakers on the subject, who, judging by the inclination of their arguments, fancy that an ideal condition of railroad service will be established through a strict enforcement of each railroad company's rules for employees. Were it possible to red-tape the movement of trains as well as of detached engines and cars with the same degree of accuracy as that prevailing in a fine piece of machinery, railroads would be operated with all the perfection which exists in a cotton mill, for instance, yet there would surely be some persons to get their hands in the machinery and be injured.

The human factor must ever be reckoned with, and it is this which makes the operation of railroads such a problem even to the most painstaking and careful of operating officers. Safety for passengers can be assured by all railroads, and is assured by many of them. Statistics reveal that the percentage of danger in passenger travel is very small. It is among railroad employees that a high percentage of peril persists, notwithstanding that efforts have been made time and again, and are still being made, to reduce it to approximately the same figures as one finds concerning travelers. As John McManamy, a writer in a recent issue of the *Railway Age Gazette* says, it is only necessary to walk through the yards of any railroad to see flagrant violations of the rules which the companies have framed to surround their operatives with all safety possible in their necessarily dangerous occupation.

Unfortunately, one of the chief obstacles to cultivating a high degree of prudence among railroaders is the natural disposition of many men, but more especially young men, to do daring things. The opinion, or the pretended opinion, of others who may be looking on will often influence an impulsive man to take a risk which, if alone, he would not assume. He then feels a particular pride in doing some reckless act contrary to the dictates of sense, and if he succeeds in accomplishing an especially foolhardy thing, he is more than likely to do the same thing again. Statistics concerning accidents among employees are appalling, yet a large percentage of their injuries are owing to their own indifference to danger and heedlessness as to words of caution directed to them.

These are the facts also with regard to various industries which are surrounded by a high degree of personal hazard. In the manufacture of steel there are processes dangerous to eyesight. To guard against optical injury safeguards are provided for the use of employees, but they will not always make use of them, and it is difficult for either employers or department officers to impress all workmen with the need for constant vigilance in order to prevent accidents. For some men it seems impossible to cultivate a habit of vigilance so far as personal safety goes, although they realize, when their attention is drawn to it, that it should be cultivated.

Moreover, employers find it often difficult to impress workmen with the great advantage to be derived from the use of facilities which have been

provided to improve sanitary conditions, and it is probable that they will never be able to obtain complete co-operation from some employees. Such are not adaptable to rules and regulations, although they may be good workmen, yet it must be admitted that, as a rule, your good workman is in accord with everything done for his personal welfare, because he is systematically inclined, if not for the reason that he desires to avail himself of advantages based upon considerations for his health and his personal cleanliness.

Undoubtedly these safety and sanitary movements will finally prove extremely valuable, owing to their influence upon the lives of men outside of their vocations. Habits of safety and sanitation will be formed and constantly cultivated, most individuals reaping all the benefits which may be expected, while others will get some advantages, although not all, for the very lack of that vigilance and forethought which is characteristic of them. Household life, as well as factory life, will thus be improved and higher standards of living will be established, so that advances already made will be exceeded with gratifying results to everyone concerned.

WOODWORKING IN SOUTH CAROLINA.

OF the total land area in South Carolina, 19,516,800 acres, 12,000,000 acres are in woodland, of which about 5,500,000 are forests, which, in 1912, produced 779,000,000 feet of softwood lumber and 38,000,000 feet of hardwood lumber, a total of 817,000,000 feet of lumber. The opportunities for woodworking industries in the State are indicated in the following table showing the quantity of lumber used in a number of leading products and the quantity of the lumber used which is grown in the State:

Wood Used in South Carolina, Feet.			
	Quantity used.	Grown in South Carolina.	Grown out South Carolina.
Planing-mill products.....	368,301,000	357,801,000	10,500,000
Sash, doors, blinds and general mill work.....	25,936,000	21,482,000	4,454,000
Baskets, fruit and vegetable packages.....	7,800,000	7,800,000	.....
Boxes and crates, packing...	6,160,000	5,585,000	575,000
Shuttles, spools and bobbins.	5,100,000	1,600,000	3,500,000
Caskets and coffins.....	3,607,000	3,204,000	403,000
Car construction.....	1,617,100	1,603,200	13,900
Furniture.....	1,518,000	1,518,000	.....
Vehicles and vehicle parts..	784,300	504,800	279,500
Ship and boat building.....	756,007	418,300	337,107
Handles.....	681,500	681,500	.....
Fixtures.....	272,000	156,000	116,000
Agricultural implements.....	46,000	46,000	.....
Patterns and flasks.....	40,500	10,000	30,500
Miscellaneous.....	1,046,100	61,100	985,000
Total.....	423,665,507	402,471,500	21,194,007

In these industries were used in 1912 thirty-one kinds of woods, of which three—mahogany, Spanish cedar and lignum vitae—were foreign woods, while the others are native to the State. They are ash, basswood, beech, birch, black gum, black walnut, chestnut, cottonwood, cotton gum, cypress, dogwood, elm, hickory, loblolly pine, long-leaf pine, persimmon, red cedar, red gum, red oak, short-leaf pine, silver maple, Southern white cedar, spruce, sugar maple, sycamore, white oak, white pine and yellow poplar.

The most important cuts were the pines, aggregating 751,000,000 feet; cypress, 26,000,000 feet; red gum, 14,000,000 feet, and the oaks, 13,000,000 feet. More than half of the lumber cut, or 415,000,000 feet, was shipped to points outside the State, and of 402,471,500 feet of native lumber used in the State, 357,801,000, or 88 per cent. of the total, were turned into planing-mill products, about the simplest form of manufactured lumber, including flooring, ceiling and siding. In these products 319,056,000 feet of pine were used. The next largest amount of native wood used, 21,482,000 feet, went into sashes, doors, blinds and general mill work, and of the total 19,778,000 feet were pine. The rapid development of the trucking industry along the coast has created a local demand for fruit and vegetable packages, made of short-leaf pine, black gum, yellow poplar and red gum, of which in the aggregate 7,330,000 feet were used in 1912, while the call for cases for packing yarn and other cotton goods made in the textile factories along the fall line of the State accounts for 3,482,500 feet of the gums and 2,020,000 feet of the pines in the total of

Developing The South Through Railroad Work

[Editorial Correspondence Manufacturers Record.]

Daytona, Fla., February 12.

About 175 people are employed in the development work which is being so vigorously pushed by the Southern Railway Co. and its associated lines for the upbuilding of the South. These men are experts in their various lines. Some of them are experts in the handling of immigration, some are experts in securing capital for investment, some are experts in finding the best locations for industrial interests, some are experts in various lines of agricultural activities, and so the 175 men, whose work is given exclusively to the upbuilding of the territory of the South through which the Southern Railway runs, count many times in value to the South and in cost to the railway, of the services of non-experts.

Take, for instance, the head of the land and industrial department, M. V. Richards. He is one of the foremost experts in America in the development of a territory through industrial and immigration operations. For 20 years or more Richards has been at the head of this work for the Southern Railway. Born in the West, of Virginia parents, identified in early life with immigration work in the West, he later turned his attention to the South. When Samuel Spencer was president of the Baltimore & Ohio Railroad long enough to discover that the \$40,000,000 surplus which had appeared on the books of that road for some years was not worth much more than \$40, he had Richards as the industrial agent of the Baltimore & Ohio. When Spencer left the Baltimore & Ohio presidency to take up the gigantic task of welding into one system the disjointed bankrupt streaks of rust which, to a considerable extent, represented the lines put together for forming that system, he took with him M. V. Richards. During the last 20 years Richards has given his attention as the head of the Southern Railway Co.'s land and industrial department exclusively to the work of the upbuilding of the great territory served by the 8000 miles of road controlled by the Southern and its affiliated lines. Richards knows that territory; he knows all of its strong points and its weak points; he knows its resources in raw materials and in climate about as thoroughly as the well-informed truck grower knows the variety of soil in the dozen or so acres of land out of which he makes his living.

Under his leadership there has been built up an organization whose work for the South has been far beyond the general understanding of the people of this section. Just now there is considerable talk in the newspapers of inducing the men who, for the last five or six years, have been at work in Panama, and who have thus become accustomed to a warm climate, to settle in the South when the canal construction activities are over. This is talked of by some papers as though it was a new thing. Richards was, to my personal knowledge, busy at work on that campaign more than two years ago. The newspapers are talking about opening up a line of immigration from Great Britain into the South. The Southern Railway has been at work on that job for some years, and has maintained an expensive office in London under Richards' direction, and he is often over there helping to direct this work. The importance of turning the attention of the people of the West to the resources of the South is being vigorously urged in many directions, and very wisely so. But for years the Southern Railway has maintained a branch office in St. Louis, and more recently it has established offices in Denver and St. Paul, whose work is devoted exclusively to making known the advantages of the South to attract money and people to this section. The extent of this work may be understood from the simple fact that the St. Louis office alone travels six men through its territory in the interest of the Southeast. These men report direct to the St. Louis office. While the industrial department of the Southern Railway has its head office in Washington, it maintains offices for this work and traveling agents in each territory, in Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi and Tennessee. Its offices maintained outside of the South engaged in this work are at St. Louis, Harrisburg, St. Paul, Denver, and London, England.

For some years this department of the Southern Railway has carried on extensive exhibit and educational work with much success. Its exhibits made at the

various county fairs in the North and West have attracted very wide attention.

In this department much attention is given to the encouragement of diversified agriculture, and eight experts are engaged as dairy and poultry agents. They are stationed at different points of the system, and devote their time entirely to the encouragement of the development of the dairy and poultry industry. A dairy instruction car is maintained at large expense, and is exhibited from time to time at various towns along the line of the road for the express purpose of educating the people as to the importance of the dairy industry and for the purpose of giving specific instructions regarding the dairy industry and how to handle it in all its branches.

Several years ago the Southern Railway organized a department known as the department of farm improvement work, whose business it is to advise farmers tributary to the various lines of the company in regard to the best methods of farming. While this department is not under the direction of the land and industrial department, the agents of both departments co-operate to the fullest extent possible in furthering the progress of the South.

And then in the freight traffic department there are a number of livestock agents, whose duties are to aid in the development of the livestock industry. There are also several men of ability known as market agents, who co-operate with Southern farmers in finding markets for their products.

The amount of money expended by the Southern Railway in carrying on this work must necessarily be very large, as indicated by the employment of 175 men, most of whom are experts of ability who command high salaries, or at least ought to do so, for they are worthy of good pay. And yet it is certain that the value of this work to the South is many times greater than the outlay. In this case the South is getting the benefit of this magnificent campaign of having its resources made known throughout this and other lands entirely without cost, for the Southern Railway is doing this as a part of its work and for the betterment of its own territory, realizing that whatever adds to the prosperity of the South will ultimately add to its own prosperity. It may be said that the railway company is doing this from a selfish point of view. Even grant that is true, it is only the selfishness which is of necessity found in all of the business activities of mankind. It is difficult to find any business industry, it matters not how high ethically may be the plane upon which it is conducted, that does not have in it that selfishness, if such a term can properly be used, as that which is shown by railways which advertise their own territory.

No one would for a moment imagine that a railway could advertise and develop its own territory without itself receiving some benefits from the work. Unfortunately, there are some roads whose managers are not broad enough to appreciate the importance of work of this kind. Believing that the country tributary to them will of itself develop, they look upon work such as that which the Southern Railway is doing through its land and industrial department and through the wide advertising campaign it conducts in all parts of the land as to the resources of the South, as an unnecessary expenditure.

The Southern Railway looks upon it as a wise investment, though the cost of this work must run far into hundreds of thousands of dollars a year.

In the 20 years that Mr. Richards has headed this department he has seen its influence rapidly expand. He has seen the cumulative power of the steady plowing and the seeding of the years, as year after year he has widened the circle of those whom he touches in his efforts to bring people and money into the South. He has seen the influence of his department with the people of the South steadily develop. He has seen that the South is fully realizing the magnitude of the work of his road and the thoroughness with which he has handled it, and wherever he appears in the South, whether at a meeting of farmers or a gathering of business men, he is hailed as one of the men whose influence for the upbuilding of this section has been mighty in its power.

When Mr. Spencer passed away and Mr. Finley took up his work, there was no lessening of the interest of the

5,585,000 feet of native woods that went into boxes and crates. The textile industry is responsible, too, for the development of the manufacture of shuttles, spools and bobbins, requiring 5,100,000 feet of dogwood, persimmon and gums, of which 1,600,000 feet were cut in South Carolina. These five lines of products consumed 413,297,000 feet, or nearly 98 per cent. of all the lumber used in South Carolina, the total including 207 feet of lignum vitae, used in boatbuilding; 500 feet of mahogany in foundry patterns and flasks, and 75,000 feet of Spanish cedar in cigar boxes.

Although the thirteen special lines of industries using South Carolina lumber represent the greater part of the use of native lumber in the State, there are many miscellaneous products using as yet only a small quantity of native woods. The possibilities of development in this field are suggested in the list of wood products published in the bulletin on wood-using industries of South Carolina, by Stanley L. Wolfe, published by the State Department of Agriculture, Commerce and Industries in co-operation with the National Forest Service, from which the facts in this article have been derived. In many of the miscellaneous products, and, indeed, in such lines as furniture making, vehicles, agricultural implements, etc., only a beginning has been made.

The co-operative study naturally deals to some extent with the question of the conservation of the lumber resources, that is to say, the most effective use of lumber material. It points out that forest fires are the greatest source of waste, although the cutting of high stumps is still common, and the practice of abandoning felled tops is more general than it should be. The natural position of the lumbermen in this respect is given due consideration, as is also that of the managements of shops and factories in not working up material for which no market is at hand. But, it is pointed out, that large slabs and serviceable scraps are now made in greater quantity than before into laths, shingles, boxes and molding instead of going to the burners; that sawdust is generally used for fuel, and at one point is used as a basis for the derivation of ethyl alcohol, and that some of the closest utilization of material takes place in the manufacture of handles and vehicles, and ways are being devised to use the small cuttings from shuttles and shuttle blocks for knife handles and loom speeders.

After all, however, the fact that 415,000,000 feet of the \$17,000,000 feet of lumber cut in the State go outside the State for further handling indicates the neglect of wealth-producing opportunities in this field, even though the census of 1910 showed that lumber and timber products rank second to cotton goods, which lead among the industrial outputs of South Carolina. That State, however, is not unique in this particular. Circumstances beyond the control of the people of the South compelled that section for many years after the revival of its manufacturing activities to devote most of its energies to primary movements in manufacturing, leaving the more remunerative operations to other sections. But the South is learning the advantage of bringing all of its material to the most finished production instead of being a producer of rough material for manufacturing. This knowledge is especially applicable to the woodworking industries, inasmuch as the rest of the country is coming more and more to depend upon the forest resources of the South. It is the part of wisdom for that section to sell the products of its forests in finished form, assuring in the process employment of hundreds of thousands of men in manufacturing and widening the home markets for producers in agriculture.

RIGHT MEASURE OF SUCCESS.

IN celebration of its thirtieth anniversary the Knight & Wall Company, wholesale hardware, of Tampa, Fla., announced its intention of establishing a permanent scholarship in the University of Florida for some young man of Southern Florida. The business of this company has grown with Tampa into one exceeding a million dollars a year, and its example in founding the scholarship as a record of its success ought to be followed by every business concern of any size in the South to assure the rising generation of proper preparation for participation in future Southern development.

road in this land and industrial department. Indeed, Mr. Finley pressed the work forward with increasing activity, and through his own personality and the tremendous energy which he threw into everything that looked to the upbuilding of the South. And now that Mr. Finley has passed away, he has been succeeded by Fairfax Harrison, who in many ways in the past has fully demonstrated his enthusiastic devotion to the broad upbuilding of the agricultural and industrial interests of the South. It may be depended upon with absolute certainty that under his administration there will be no halting in the work of advertising the South and of doing the things which the land and industrial department has been so vigorously doing for many years in making known the South's resources and attractions through its own traveling men, through the exceptionally intelligent literature which it publishes and through its monthly publication, *The Southern Field*, which is one of the very best railway publications issued in this country in behalf of the territory tributary to any road. Indeed, it was a pioneer in this work. It has been imitated by many, but surpassed by none.

In this day, when all sorts of efforts are being made to create the impression that nothing of great importance was ever done to attract attention to the South or to bring about the diversification of Southern agriculture until within the last few years, full credit should be given to roads, such as the Southern, which have for so many years been doing this work, and doing it with such intelligence and bringing forth results which none but those in touch with it have had any conception of. Thousands of men and millions of capital have been drawn into the South by the work of the Southern Railway. There is probably no other railroad in America, and that is a rather broad statement, which has a more thoroughly organized department of this kind, where information covering so completely so wide a variety of interests has been gathered and is available at a moment's notice, than the Southern Railway.

In the Washington office of this department an almost limitless amount of data has been gathered about the mineral and the timber and the agricultural and the water-power interests of the great region which stretches from the Potomac to the Mississippi and from the Gulf to the mountain regions. It is but right that this should be so, for there is probably no other railway in this or any other land which drains a territory of such limitless potentialities as that tributary to this road. Unlike roads which have a limited territory upon which the entire energies of the line can be concentrated for development, the Southern Railway has a territory of infinite variety of climate, soil, minerals and timbers. It has on its line some of the richest coal and iron regions known. Its lines cross rivers which are capable of furnishing millions of horse-power, only a fraction of which has yet been developed. Its lines stretch from the Bluegrass regions of Kentucky, the very heart of the world's stock-raising interests, through the marvelously dowered mountains of the Carolinas and Georgia and Alabama, along the ridge of the Piedmont country, the heart of the cotton manufacturing industry of the South and destined to be the heart of the textile industry of the world, on down to the coast, where the attractions of Florida and the Gulf coast of Alabama present exceptional advantages to the health and the home seeker. Thus this road in its development work has to cover every variety of climate, the mountain resorts of the Carolinas and the winter tourist regions of the Gulf coast, the hardwood and mineral resources of the mountain regions and the great pine forests of the lower South, the coal and the iron and the marbles of the mineral districts, and all the varied manufacturing and general developmental interests of that rapidly-growing region all the way from Washington on down through Alabama to the Mississippi River. It is a great country, and it is worthy of the broadest work ever done by any railroad on earth for the development of its territory.

The Southern Railway is measuring up every year more and more to the situation. Richards has always realized the opportunity. Possibly he has not always been able to move as rapidly as his own judgment might have indicated, for he could see possibilities in this work which none could see unless they had his knowledge, gained from his immediate touch with the work.

In the way the Southern Railway is now carrying on this campaign to attract settlers, to bring money into the South, to secure industrial development, to build up diversified agriculture, to encourage poultry raising and dairying and the improvement of the soil, and to make a fight against the boll-weevil and other pests which

bring losses to the farmer, is setting an example which could to profit be followed not simply by every other railroad in the South, but by every other railroad in the United States, barring none.

Men like Richards, upon whom rests the responsibility for land and industrial work of railroads, are doing the creative upbuilding work which makes two factories to grow where none existed before or which makes prosperous agricultural conditions to flourish, where prosperity had been unknown. They are the real freight creators when they measure up to their opportunity, and when any road has a man at the head of such a department who is not achieving these things, the fault is either in the man or in the failure of the road to back up his work.

R. H. E.

MEXIA GAS FIELD.

Notable Development of Natural Fuel Attracts Industries.

[Special Correspondence Manufacturers Record.]

Mexia, Tex., February 12.

There has been developed in this section one of the most remarkable gas fields in many respects to be found in the country. With shallow wells and low rock pressure, no cap rock and no recognized gas-bearing sands, there has been developed a total present production in 21 wells in the district amounting to 102,000,000 feet of gas a day. The proven territory is more than 12 miles long, running from northwest to southeast and is from one-half to two and one-half miles in width. The field has not been defined, and development work is being continued with the idea that a field of much greater extent will be developed, and also with the idea that perhaps an oil stratum or deeper gas-producing sands may be found.

Gas in the present field is found at an average of 700 feet deep in sands averaging 35 feet. Above the sands shale is found, but in no case has a well-defined cap rock been encountered. The rock pressure is uniform at 276 pounds. The gas is remarkably rich in heat units, proving up 1060 B. T. U., which is second only to the gas of West Virginia and Pennsylvania. It is absolutely free from water and only two wells have shown any odor. It seems to have a paraffin base. The flow of gas is from a few thousand up to 12,570,000 feet per well on measurements taken by E. D. Leland and W. T. Griswold, Pittsburgh experts, who were sent into the field by the Texas Light & Power Co. previous to contracting for the use of the gas at the Waco plant of this company. The development has practically been carried on entirely by local men and capital.

Operations were begun July 2, 1912, and 10 dry holes were put down before any gas was struck. In the eleventh well a producer was obtained in April, 1913. For a long time there was only one rig in the field, and at the present time only five, so that development has been necessarily somewhat slow. From now on it is expected that there will be more activity. By some of the companies it is proposed to put in deep wells, with the idea that perhaps the Woodbine sands, which are struck at 2300 feet in the Caddo field, may be found somewhere less than 3000 feet deep in this section. The Producers' Oil Co. and the Guffey people and others have leases on property, manifestly with the idea that perhaps oil wells will be brought in and, in case there should be a strike of oil there will undoubtedly be a vastly greater interest taken in the field by outside parties than is possible in the development of purely a gas field.

The Mexia Oil & Gas Co. was the first company in the field and has been the largest developer. They have much the largest acreage of any company in the field, and could put down 150 wells on their own tract at a distance of not closer than 1500 feet apart. This company supplies Mexia, and through them a contract has been let with T. J. Driscoll of Indianapolis and associates to furnish gas for pipe line to Waco, which is now being surveyed and which will furnish gas to the Texas Light & Power Co. The Driscoll contract also includes the production of three smaller companies here.

The Driscoll interests are making efforts to secure franchises at intervening and adjacent towns and cities.

The Little Giant Oil & Gas Co., of which A. E. Wilder is president, is furnishing gas to a company at Teague which is supplying that town.

G. W. Stough of Kansas, with the Little Giant Company, has a franchise for an additional pipe line to Waco.

C. T. Herring of Amarillo has a franchise at Groesbeck, and has applied for franchises in Kosse, Thornton and Marlin.

Efforts are being made by the local trade organizations and business men to interest outside factories in Mexia in view of the development of the large gas production. The most important immediate development has been the location here of division headquarters for the Houston & Texas Central Railroad. A very favorable contract for gas has been made for 25 years and also for a water supply. The freight, passenger and dispatcher's division headquarters will be at Mexia, the company having bought 265 acres in the south end of the town for eight miles of terminals, repair shops and roundhouses. A six-stall reinforced concrete roundhouse is already under construction, and it is proposed to have 13 additional stalls within a year. The repair shops are expected to be the largest in either Texas or Louisiana, according to statements made by local authorities. Gas was sold on a contract to the railroad company as an inducement for the location of such an important improvement at three cents a thousand; the price to industries in general will be about seven cents. Since the gas development there have been two limestone-crusher plants established, one at Tehuacana and one at Springfield, each turning out about 300 tons of crushed rock per day. It is stated that this deposit of limestone is the only limestone bed of any consequence in central Texas. The crushed rock is being shipped to Houston and Galveston, and one contract calls for 300,000 yards to be delivered to the T. & B. V. R. R. The rock is stated to contain 85 per cent. of lime, but there are no available local statistics as to its adaptability to Portland cement manufacture.

Negotiations are being carried on for some brick plants. Brick shale abounds here which has been demonstrated to be the equal of the Corsicana shale and superior to most other shale in the State, and with immense beds of this clay, at a rate of seven cents per thousand for gas, 12,000 feet of which will burn 1000 brick, making a cost of \$4 cents a thousand, the very considerable advantage in price over the cost of burning by wood or oil would seem to make the development of a brick industry here inevitable. Within seven miles of town are inexhaustible beds of clean, sharp sand, entirely adaptable to the manufacture of bottles, window glass, plate glass, etc.

Mexia has a present population of something under 5000, and is already showing the effects of the gas development.

The dirt streets are to give place to paved ones and the country roads are to be macadamized, \$165,000 having been already voted for macadamized roads, which will be about 60 miles in extent and will radiate from Mexia in every direction. The city will spend \$20,000 for paved streets and the property owners will add \$60,000, so that an \$80,000 improvement will occur. Bonds have been voted and approved, but have not yet been sold. However, it is expected that the work will be completed this year. ALBERT PHENIX.

Altitudes in Florida.

It will probably be news to many person that Florida is not a flat land, but that it has many considerable elevations, and rises at one point to a height of 301 feet, near the northern boundaries of Gadsden, Walton, Santa Rosa and Escambia counties. The surface of the State presents, according to the United States Geological Survey, considerable diversity, ranging from a nearly level plain in the coastal region and the Everglades to a deeply dissected upland in the northern part of the State, where it is trenched by steep-walled valley, and to a highland in the peninsula, where it shows many more or less rounded depressions separated by narrow divides. Altitudes within the State range from sea level to more than 200 feet above at places on the ridge that forms the center of the peninsula. The southern part of the peninsula, comprising an area about 150 miles long and over 100 miles in average width, lies in general less than 50 feet above sea level. Narrow strips of lowland also border the Atlantic and Gulf coasts.

Tallahassee, the capital of the State, stands about 205 feet above sea level, on a remnant of the upland which has been isolated by erosion. According to the list of altitudes furnished by the Seaboard Air Line Railway, Mt. Pleasant is 301 feet above sea level. This is the highest accurately determined point recorded in Florida.



STEVENS CREEK HYDRO-ELECTRIC DEVELOPMENT OF THE GEORGIA-CAROLINA POWER CO.

Another Hydro-Electric Plant In Action

STEVENS CREEK DEVELOPMENT OF GEORGIA-CAROLINA POWER COMPANY
FORMALLY OPENED

[Special Dispatch to Manufacturers Record.]

Augusta, Ga., February 16.

Augusta's new electrical power became a reality today when the 30,000-horse-power plant at Stevens Creek, on the Savannah River, was put into operation, with 500 people present at the exercises. J. Pink Wood, the man with a vision, who succeeded in interesting capitalists in the work, threw the switch that caused the giant wheels to make their first revolutions. There was not a hitch in the proceedings. Included in the crowd of visitors were about 200 prominent Augusta business men, the same number of nearby visitors, while 100 prominent tourists, capitalists and those directly interested in the work constituted the remainder of the party. A feature of the gathering was the bringing together of Frank Q. Brown, head of the present power development, and Chas. Estes, famous as founder and developer of the Augusta Canal 67 years ago. Though 95 years old, Mr. Estes went over the big hydro-electric plant in every detail, and was enthusiastic over the accomplishment.

Those present included Frank Q. Brown, president of Redmond & Co. of New York, who is also president of the Augusta-Aiken Railway and Electric Corporation; R. Lancaster Williams of Middendorf, Williams & Co. of Baltimore, whose firm is equally financially interested in the power development with Redmond & Co.; Dr. Albert Shaw, editor of the *Review of Reviews*; Mr. J. H. Pardee, president of the J. G. White Management Corporation; Mr. Jos. K. Choate, vice-president of the J. G. White Management Corporation; Mr. W. R. Sullivan of New York; Mr. W. E. Benjamin of New York; Mr. Alexander Pratt of New York; Mr. D. H. Thomas, secretary-treasurer of the Augusta-Aiken Railway and Electric Corporation; Mr. Kennedy of the J. G. White Companies, and Mr. J. W. Steele of Philadelphia.

After an inspection of the plant the guests were served with an excellent Georgia barbecue, the weather being ideal. At dinner addresses were made by Mr. Frank Q. Brown, who outlined the plan of the interests he represented, stressing the fact that it was a belief universal that the development of the South during the next decade warranted stupendous undertakings. Following him Mr. J. H. Pardee, president of the J. G. White Management Corporation, told of the great work that had been accomplished and the prospects for the future; Dr. J. R. Littleton spoke on Augusta's development from the other side, including especially the big hospitals and medical college; Rev. Howard T. Cree spoke on community interest as related to community development, and Dr. Albert Shaw, on developing and elevating manhood while making material progress. Dr. Ashby Jones emphasized the nation-wide importance of the event, characterizing it as a binding force that would common the cause of South and North and East.

The evening celebration at the Commercial Club was one of the most enthusiastic nature. A large throng crowded the streets to see the magic change of the electric power when the switch was thrown, putting the

electric system of Augusta on the wires of the new plant. At the evening meeting Mr. Thos. W. Loyless, editor of the *Augusta Chronicle*, acted as toastmaster, introducing the speakers in his inimitable manner. Capt. P. H. Rice, president of the Merchants and Manufacturers' Association, which has just finished a campaign successfully, securing \$15,000 a year for its work, occupied the chair and called the meeting to order. Governor John M. Slaton, who was expected as principal speaker, could not come on account of Senator Bacon's death. The large party of capitalists and visitors declared themselves to be notably impressed with the result of the gathering and the prospect for future progress.

The Stevens Creek development of the Georgia-Carolina Power Co. is on the Savannah River, about nine miles above Augusta, and one mile above the Augusta Locks dam. As the site for the development was located in a very sparsely settled farming country and the plantation roads were in such poor condition, it was necessary to build roads and bridges, construct a telephone line of several miles to connect with the city system and to put in a standard-gauge railroad connection. Living quarters with all the needs of a small town also had to be installed, because it was necessary to provide for a working force of over 1000 men, which meant a community of about 1500 people.

All of this work has to be carried on simultaneously with the installing of construction equipment and the beginning of actual work in the river. Work on the first cofferdam was started in July, 1912, and designed to enclose the power-house, lock and tailrace portion, and the first concrete was placed in this enclosure on February 14, 1913. The placing of concrete then proceeded daily with practically no interruption until January 19, 1914, when the final closes were made in the spillway section of the dam.

The mechanical equipment to accomplish this work consisted in part of a main rock-crushing plant, in which was installed one No. 5 and one No. 9 gyratory crusher, with the usual hopper, elevator and screen arrangement. This equipment was designed to supply 2½-inch stone, the output being stored between the crusher and mixer buildings by means of a belt conveyor apparatus some 400 feet long, or carried direct to the bins over the mixers. Beneath this storage space was provided a tunnel, with carrying-belt arrangement which conveyed the stored material to the mixer elevators, thus providing not only for reserve storage, but an auxiliary feeding arrangement in case the crushers were idle.

The mixing plant housed two one cubic yard rotary concrete mixers, which were charged by gravity from overhead bins of several hundred cubic yards capacity. Cement was brought to the charging hoppers from the large cement storage-houses 100 feet distant by means of a belt conveyor, the sacks being automatically counted in transit. The storage-house had a capacity of 10,000

barrels of cement, which were provided to obviate any delays which might be caused by manufacturing or transportation delays. All cement was furnished by the Clinchfield Portland Cement Corporation, Kingsport, Tenn.

The excavation and concrete placing equipment consisted in part of stiff-legged derricks, with 70-foot booms and 12-foot bull wheels, and operated by 8½x10-inch double-drum hoisting engines and 4½x6-inch swinging gear. Twelve of these set-ups were provided.

The concrete was conveyed in steel, bottom-dump buckets of 2½ cubic yards capacity from the mixer to the site on narrow-gauge flat cars, a train usually consisting of five cars, one bucket to each car. As the loaded trains arrived under the derricks the buckets were detached, swung to position, lowered and dumped with rapidity. The facility of this arrangement may have been seen by the performance on November 8, 1913, when 1006 cubic yards were deposited at a point about one-half mile from the mixer in nine hours, making use of three trains of five cars each.

The extensive area of construction is shown by the fact that there were in operation near the site approximately four miles of narrow-gauge railroad and one mile of standard-gauge railroad, the rolling equipment consisting of seven 10 to 15-ton and one 40-ton locomotive, with 70 cars of various designs.

This entire undertaking involved a dam with a total length, including power-house, of 2700 feet; a power-house designed for an ultimate equipment of 31,000 horse-power, with initial installation of 15,000 horse-power, and a lock 30 feet wide and 150 feet long for the passage of vessels on the river.

The lake created by the dam extends 14 miles up the Savannah River and 13 miles up Stevens Creek, giving altogether a surface area of about 4000 acres, the size of the lake providing for the operation of the plant on any desired load factor at all times, and it will also be sufficient to equalize the daily fluctuations during the weeks of low flow.

The dam proper is of Cyclopean concrete construction, the concrete being mixed in the proportion of one part Portland cement, three parts of sand and six parts of broken stone, and large irregular fragments of rock are imbedded in the concrete. Altogether approximately 90,000 cubic yards of concrete was used.

There are five sluiceways, 8x8 feet, installed in the section of the dam adjacent to the lock, the mechanism for these gates being located within the dam. The main value of the sluiceways will be to handle small floods.

The power-house has a substructure of concrete and a superstructure of steel and brick. Its general dimensions are 51x388 feet.

The turbines are of the vertical type, 104 inches in diameter, and are set in a concrete spiral casing, with concrete draft tubes. All operating parts of the turbines are accessible for quick repair if needed, making it unnecessary to unwater the wheel casing, with the one exception of accident to the runner. These turbines were made by the I. P. Morris Company, Philadelphia.

The initial installation of electrical equipment consists of five vertical-type three-phase 60-cycle 2300-volt 2700 K. V. A. generators, two 300-kilowatt 250-volt exciters, three 5400 K. V. A. transformers, stepping up from 2300 volts to 44,000 volts. All of this equipment

was furnished by the Westinghouse Electric & Manufacturing Co., Pittsburgh, Pa.

All wiring in the plant, where possible, is installed in conduits buried in the concrete floor.

The transmission line to Augusta is about seven miles long, and consists of galvanized steel towers designed for two circuits, with three wires on each side. The spacing of the towers is about 10 to the mile. Two special towers are installed at the Lake Olmstead Crossing, these being 80 feet high and providing a span of 900 feet. The transmission towers were furnished by Milliken Bros., Inc., New York. The wire for the power currents consists of No. 1/0 17-strand medium hard drawn copper. Ten feet below the lowest power wires a telephone circuit is run, and all instruments are protected by transformers. The wires are hung on suspension-type insulators, made by R. Thomas & Sons Company, Lisbon, O.

The substation in Augusta adjoins the steam plant of the Augusta-Aiken Railway & Electric Corporation. This building is designed with two galleries, and there will ultimately be installed three banks of three each 2000 K. V. A. single-phase transformers, stepping down from 44,000 volts, three-phase, to 13,000 volts, three-phase, while provision is also made to further step down to existing circuits in Augusta of 2300 volts, two-phase. All of the equipment in the substation was furnished by the General Electric Co. of Schenectady, N. Y.

To meet the requirements of navigation, a concrete masonry lock has been constructed through the dam between the power-house and the sluiceways. This lock has a normal lift of 27 feet, and is 30x150 feet in the clear.

This development was designed and constructed by the J. G. White Engineering Corporation, New York.

The completed plant is to be turned over to the Augusta-Aiken Railway and Electric Corporation, and this company will supply the power market centering around Augusta.

LUMBEMEN'S WELFARE WORK.

Policy Adopted by the Yellow Pine Manufacturers' Association.

In the past years the Yellow Pine Manufacturers' Association has been taking special interest in making the best possible working and living conditions for employees generally in the industry. A special welfare committee has been directing the work and studying conditions closely.

At the annual meeting in New Orleans last week the report of the committee, presented by Mr. J. Lewis Thompson, chairman, was one of the features of the sessions. The report was received with general approval, and its adoption places this Association in the front rank of trade organizations in matters of social advancement.

There have been notable advances in community betterment on the part of many individual companies in the yellow pine business, and there are conspicuous examples of almost ideal conditions, judged from any angle, physical, social or moral. Now the object of the Association is to multiply these examples as widely as possible, and to stimulate interest in the subject, and co-operate with companies having further improvements in mind.

After reviewing the work of the past year and calling attention to special lines of inquiry now being made, the report ended with proposed action for the coming year, including the following recommendations:

Publication of leaflets on malaria, hygiene and sanitation and of a handbook on first aid to the injured.

Conferences of doctors in sawmill towns and camps in co-operation with State boards of health.

Establishment of library facilities for mill and camp communities, with commendation of State boards of education for establishing courses in domestic science and industrial training and promoting community work through school buildings and school leaders.

Increase of co-operation between company managements and organized church interests, so that leadership in lumber towns and camps may be kept up to the highest standard.

The holding of a series of conferences to bring foremen and other officials together for the solution of vital problems of industrial leadership.

A welfare exhibit in connection with the coming forest products exposition.

Continued co-operation of the Young Men's Christian

Association through the industrial department of the International Committee with the financial support of members of the Yellow Pine Manufacturers' Association.

The personnel of the welfare committee is J. Lewis Thompson, Houston, Tex., chairman; S. J. Carpenter, Jacksonville, Fla.; R. A. Long, Capt. J. B. White, Kansas City, Mo.; Geo. K. Smith, S. H. Fullerton, St. Louis, Mo.; J. L. Kaul, Birmingham, Ala.; A. Trieschmann, Crossett, Ark.; J. A. Freeman, Pasadena, Cal.; H. H. Foster, Malvern, Ark.

RECORD YEAR IN PIG-IRON.

Output of the Country's Furnaces Amounted to 30,966,301 Tons.

The Bureau of Statistics of the American Iron and Steel Institute has received from the manufacturers statistics of the production of all kinds of pig-iron in the United States in the calendar year 1913. Detailed statistics are published in a special statistical bulletin of the bureau. The statistics given below for 1912 were also compiled by the Bureau of Statistics, but for 1911 and previous years they were compiled by the American Iron and Steel Association. The figures for 1913 are subject to revision.

In 1913 there were 21 States which made pig-iron, against 20 States in 1912. The total production of all kinds of pig-iron in 1913 amounted to 30,966,301 gross tons, against 29,726,937 tons in 1912, an increase of 1,239,364 tons, or over 4.16 per cent. The production in 1913 was the largest in any calendar year in our history. Combining the output in the first six months of 1913 with the output in the last six months of 1912, however, a total is reached for the 12 consecutive months of 32,143,265 tons, or 1,176,964 tons more than in the calendar year 1913. As compared with the output in the last six months of 1909 and the first six months of 1910, the two consecutive half-years of next largest production, when 29,751,863 tons were made, an increase is shown in the 1912-13 period over the 1909-10 period of 2,391,402 tons.

The following table gives the production of pig-iron in half-yearly periods from 1908 to 1913 in gross tons. Several thousand tons of ferro-phosphorus, ferro-titanium, ferro-vanadium and other alloys are included for recent years:

Periods.	1908.	1909.	1910.	1911.	1912.	1913.
First Half.	6,918,094	11,022,346	14,978,738	11,666,996	14,072,274	16,488,602
Second Half.	9,018,014	14,773,125	12,324,829	11,982,551	15,654,663	14,477,699
Total.	15,936,018	25,795,471	27,303,567	23,649,547	29,726,937	30,966,301

The production in the second half of 1913 shows a decrease of 2,010,903 tons, or almost 12.2 per cent., as compared with the production in the first half of that year. In Pennsylvania the decrease amounted to 815,176 tons, in Ohio to 191,421 tons, in Illinois to 378,057 tons, in Indiana and Michigan to 13,603 tons, in New York and New Jersey to 190,280 tons, and in Alabama to 98,435 tons. With the exception of New Jersey, Kentucky, Michigan, Missouri and Minnesota no State increased its output of pig-iron in the last half of 1913 over its output in the first half of that year.

Georgia, Texas, Oregon and Washington were the only States having one or more blast furnaces that did not make pig-iron in 1913. California, which does not have a blast furnace, produced a small tonnage of pig-iron in an electric furnace. Georgia last made pig-iron in 1894. For the first time in over 40 years, and probably for the first time in its history, Mississippi appears in 1913 among the States which made pig-iron.

The following table gives the production of pig-iron in the United States in half-yearly periods from 1896 to 1913, the increase or decrease in output of the second half-year as compared with the first half-year being shown:

Years.	First Half.	Second Half.	Total.	Inc. in 2d Half.	Dec. in 2d Half.
1896.....	4,976,236	3,646,891	8,623,127	.....	1,329,345
1897.....	4,408,476	5,219,304	9,627,780	845,728	.....
1898.....	5,869,702	5,994,231	11,773,934	34,528	.....
1899.....	6,289,167	7,331,536	13,620,703	1,042,369	.....
1900.....	7,642,569	6,146,673	13,789,242	.....	1,465,896
1901.....	7,674,613	8,208,741	15,878,354	529,128	.....
1902.....	8,808,574	9,012,733	17,821,307	204,159	.....
1903.....	9,707,367	8,301,885	18,009,252	.....	1,405,482
1904.....	8,173,438	8,323,595	16,497,033	150,157	.....
1905.....	11,163,175	11,829,205	22,992,380	666,020	.....
1906.....	12,582,250	12,724,941	25,307,191	142,691	.....
1907.....	13,478,044	12,306,317	25,784,361	.....	1,174,727
1908.....	13,918,004	9,018,014	22,936,018	2,100,010	.....
1909.....	11,022,346	14,773,125	25,795,471	3,759,779	.....
1910.....	14,978,738	12,324,829	27,303,567	2,633,969	.....
1911.....	11,666,996	11,982,551	23,649,547	215,555	.....
1912.....	14,072,274	15,654,663	29,726,937	1,582,389	.....
1913.....	16,488,602	14,477,699	30,966,301	2,010,903	.....

The following table gives the production of pig-iron by States in 1912 and 1913, increases or decreases being shown for the two years. Gross tons are used:

States—Gr. tons.	1912.	1913.	Inc. or Dec.	P. C. of Inc. or Dec.
Pa.	12,552,131	12,954,940	402,809	3.20
Ohio	6,802,493	7,129,525	327,032	4.80
Ill.	2,887,359	2,927,977	40,618	1.40
N. Y. and N. J.	1,976,107	2,187,620	211,513	10.70
Ala.	1,862,681	2,057,911	195,230	10.48
Ind. and Mich.	1,770,628	1,775,883	5,255	0.29
Wis. and Minn.	303,370	367,326	63,956	21.08
Mo.	256,167	341,815	85,648	33.43
Mo., Col. and Cal.	347,731	324,263	*23,468	*6.87
W. Va., Ky., Miss.	343,120	315,731	*27,389	*7.98
Md.	219,546	289,959	70,413	32.07
Tenn.	338,238	280,541	*57,697	*17.05
Conn. and Mass.	17,366	12,810	*4,556	*26.23
Total	29,726,937	30,966,301	1,239,364	4.16

*Decrease.

The States which decreased their output of pig-iron in 1913 as compared with 1912 were Connecticut, West Virginia, Tennessee, Michigan, Missouri, Colorado and California.

The following will give the total production of pig-iron by States by half-years:

States.	First half of 1913.	Second half of 1913.	Total for 1913.
Gross tons.			
Massachusetts	8,581	4,229	12,810
Connecticut .....	.....	.....	.....
New York	1,193,450	994,170	2,187,620
New Jersey .....	.....	.....	.....
Pennsylvania	6,885,658	6,069,882	12,954,940
Maryland	152,002	137,957	289,959
Virginia	192,539	149,285	341,815
Georgia .....	.....	.....	.....
Texas .....	.....	.....	.....
Alabama	1,078,173	979,738	2,057,911
West Virginia .....	.....	.....	.....
Kentucky	165,009	150,731	315,731
Mississippi .....	.....	.....	.....
Tennessee	189,019	91,522	280,541
Ohio	3,660,473	3,469,052	7,129,525
Illinois	1,653,017	1,274,960	2,927,977
Indiana	894,743	881,140	1,775,883
Michigan .....	.....	.....	.....
Wisconsin	222,167	145,159	367,326
Minnesota .....	.....	.....	.....
Missouri .....	.....	.....	.....
Colorado .....	.....	.....	.....
Oregon	194,389	129,874	324,263
Washington .....	.....	.....	.....
California .....	.....	.....	.....
Total	16,488,602	14,477,699	30,966,301

The following table gives the production of all kinds of pig-iron from 1900 to 1913:

States.	1900.	1910.	1911.	1912.	1913.
Gross tons.					
Mass.	18,388	16,582	9,649	17,366	12,810
Conn. ....	.....	.....	.....	.....	.....
N. Y.	1,733,675	1,938,407	1,562,756	1,929,231	2,187,620
N. J.	294,474	264,781	40,663	36,876	.....
Pa.	10,918,824	11,272,323	9,807,073	12,552,131	12,954,940
Md.	266,856	326,214	255,816	219,546	289,959
Va.	391,134	444,976	293,642	256,167	341,815
Ga.	26,072	14,725	1,200	.....	.....
Tex. ....	.....	.....	.....	.....	.....
Ala.	1,763,617	1,939,147	1,712,211	1,862,681	2,057,911
W. Va.	228,282	174,661	291,472	274,360	.....
Ky.	56,371	100,509	95,202	68,769	315,731
Miss. ....	.....	.....	.....	.....	.....
Tenn.	333,845	397,569	324,648	338,238	280,541
Ohio	5,551,545	5,752,112	5,310,506	6,802,493	7,129,525
Ill.	2,467,156	2,675,646	2,108,092	2,887,359	2,927,977
Ind.	964,289	1,250,103	1,163,932	1,770,628	1,775,883
Mich. ....	.....	.....	.....	.....	.....
Wis.	348,177	307,200	276,807	306,370	367,326
Minn. ....	.....	.....	.....	.....	.....
Mo. ....	.....	.....	.....	.....	.....
Col.	382,766	428,612	395,968	397,731	324,263
Wash. ....	.....	.....	.....	.....	.....
Cal. ....	.....	.....	.....	.....	.....
Total	25,795,471	27,303,567	23,649,547	29,726,937	30,966,301

For a \$2,000,000 Electric Plant.

The Arkansas Hydro-Electric Co., U. S. Bratton, secretary, Heber Springs, Ark., proposes to invest \$2,000,000 to construct a hydro-electric plant developing 10,000 horse-power on the Little River, near Heber Springs. Its contemplated construction is as follows: Three dams; one to be a principal power dam, 600 feet long by 90 feet high; two to be reservoir dams, 1400 and 800 feet long, respectively, and each 90 feet high; all to be of reinforced concrete construction; 100-mile electrical transmission system, costing about \$75,000. The date of opening proposals has not been determined, but the company is prepared to consider prices on electrical equipment for a four-unit installation totaling 10,000 horse-power and on water-wheel equipment for four turbines under a 90-foot head, with 70,000 cubic feet of water per minute. The engineer in charge is C. V. Smith, Southern Trust Building, Little Rock.

Under the auspices of the Efficiency Society an efficiency exposition and conference will be held in New York city April 4-11.

A MODEL DRAINAGE SYSTEM.

Completion of the Freeport Plant Providing for the Future.

[Special Correspondence Manufacturers Record.]

Freeport, Tex., February 14.

Freeport's model drainage system, which has been in the course of construction during the past 12 months, is now complete. The putting into operation of the pumping station, located at the floodgates on the drainage canal, this week marked the finishing of the Freeport engineers' plans to adequately care for the normal surface water that might accumulate in this city from rainfall or other sources.

The drainage problem here was one of the first city building factors given consideration by the New York men of affairs who are sponsors for Freeport and interested in its building into a seaport of ultimate importance on the Gulf coast. The engineers who assisted in the laying out of the community and public utility facilities were instructed to carefully work out the problem of drainage with a view to giving Freeport a model drainage system.

The basis of Freeport's drainage system is a 3½-mile drainage canal dug with a dipper dredge. It has an average width of 30 feet and a depth of 8 feet. The excavated material was used to build a protection levee against backwater inundation on three sides of Freeport, and it was this levee that played such an important part in keeping Freeport dry during the December Brazos River flood. This canal surrounds the town on three sides, the fourth being bounded by the Brazos River, which affords natural drainage. It connects on the east side of Freeport with the river.

Where the canal enters into the river a system of floodgates has been installed. There are three gates, each 5x6 feet, which close on a rising tide to bar out river water, and open by hydraulic pressure with a falling tide, permitting the canal to drain by gravity. These floodgates have an outlet capacity capable of caring for 5,000,000 gallons of water per hour flowing into the river when not subject to high tidal influence.

As the efficiency of this drainage system depends on keeping the level of the drainage canal lower than the river, a Menge low lift pump has been installed at the pumping plant, located at the floodgates. This pump has a rated capacity of 1,000,000 gallons of water per hour, and has a five-foot lift. Power for the pump is provided by a 60-horse-power gasoline engine, and it is driven by rope transmission.

In order to effectively drain the streets and acreage of Freeport, four miles of laterals to start with are contemplated. A number of these laterals have already been installed, and so far have worked with marked efficiency after heavy rainfalls, even before the pumping plant was installed.

Under the workings of this system, gravity and the floodgates take care of heavy rains through the canal, fed by laterals, but the drainage is made complete through the use of the pumping plant which will be run so as to keep the level of the canal much lower than the stages of the river, ensuring perfect drying off of all property enclosed in this system. As laid out, this system will care for a population of many thousand people for years to come, and it has been so arranged as to permit of indefinite amplification and extension. It is said to be one of the most perfect drainage systems enjoyed by any community in Texas.

Atlanta and Farm Implements.

There are now manufactured at or sold from Atlanta annually more than \$8,485,000 worth of farming implements to approximately 30,000 substantial buyers in seven Southern States, according to Clyde L. King, president of the Atlanta Agricultural Works, who in a speech in that city last week estimated that \$3,500,000 worth of such implements are sold to 14,645 buyers in Georgia, \$1,140,000 to 5200 in Alabama, \$1,050,000 to 3950 in South Carolina, \$950,000 to 1750 in North Carolina, \$720,000 to 1400 in Tennessee, \$600,000 to 2200 in Mississippi, and \$525,000 to 1100 in Florida. Mr. King estimated that if to these sales were added those made by general Southern agents at Atlanta of Eastern and Western manufacturers the total annual amount would be more than \$10,000,000. The advantages of Atlanta as a distributing center for its section were indicated by Mr. King in speaking of about 70 regularly scheduled freight trains leaving Atlanta every

day, and 75 passenger trains on eight systems of railway operating over 13 different lines.

The Birmingham Iron Market.

[Special Correspondence Manufacturers Record.]

Birmingham, Ala., February 16.

The unusually good business being done in the steel market has had its bearing on the pig-iron market with reference to the foundry irons. Southern basic iron has been none too active, but the activity in Northern basic market has been pronounced during the past week. The Eastern sheet mills continue to raise their prices, and at the same time take on a good "slice" of basic here and there. Of course, if the basic market continues to improve, doubtless some of the furnace plants will go over onto basic, thereby adding strength to the foundry market. There has disappeared from the market any disposition on the part of sellers to force sales. Quotations are being made with more firmness as to prices from the fact that the Southern furnace interests have pretty well covered themselves through the first half of the year—some sales lapping over into the third quarter. The pipe interests continue to purchase iron, a fairly good tonnage coming to the South. Prices have stiffened at \$11 per ton for first half delivery, with possibly \$10.75 for some iron which is less attractive for general casting work. The total sales for the week aggregate 17,000 to 18,000 tons. Two thousand to 2500 tons of special analysis iron was sold at a premium over the standard Alabama irons. It is safe to say that Southern producers have booked about all the low-priced iron that they care to have on their books. Buyers have also pretty well covered their needs for the next four or five months. As a rule, the foundries in the South seem pretty well satisfied with conditions. While they are not running their foundries overtime, yet they manage to keep shop going on good average time. They all seem more or less optimistic, and feel that better conditions are in sight within the next two or three months.

Following figures approximately represent the Southern pig-iron market per gross ton f. o. b. cars Birmingham:

- No. 1 foundry and No. 1 soft, \$11.25 to \$11.50.
- No. 2 foundry and No. 2 soft, \$10.75 to \$11.
- No. 3 foundry, \$10.25 to \$10.50.
- No. 4 foundry, \$10 to \$10.25.
- Gray forge, \$9.75 to \$10.25.
- Basic, \$10.50 to \$11.
- Charcoal iron, \$23.50 to \$24.

There has probably never been a time in the history of Alabama coal mining that the market conditions were quite as unfavorable as they have been for the past few weeks. This is attributable to two conditions—one being the prolonged warm weather, forcing domestic coal on the steam coal market, the other being that slack using of coal by the railroad companies. The railroads are using considerably less coal than for some years past, due, it is claimed, to short railroad business. The coke market has also kept pace with the slow coal market, and there has not been much activity in coke. Prices are about as follows: \$3.25 to \$3.50 for first-class hand-picked 72-hour foundry coke; \$2.25 to \$2.65 per ton at the ovens for smelter or furnace coke.

There has been no decided change in the pipe market. Manufacturers have managed to keep their plants running at about the average rate, stocking and filling the comparatively few orders in hand. However, prices remain unchanged and are being strictly maintained. Following are prices quoted per net ton f. o. b. cars Birmingham: Four-inch, \$22; six-inch and over, \$20, with \$1 per ton extra for gaspipe; fittings, 2½ cents per pound.

The old material market has shown considerable strength, and prices are being firmly maintained. Some good tonnages have been disposed of recently. There has been no advance in prices, except on certain choice grades of scrap. Following are approximately prevailing prices per net ton f. o. b. cars Birmingham:

- Old iron axles (small), \$15 to \$15.50.
- Old steel axles (light), \$15 to \$15.50.
- Old iron rails, \$12.50 to \$13.50.
- No. 1 railroad wrought, \$12 to \$12.50.
- No. 2 railroad wrought, \$10 to \$10.50.
- No. 1 country wrought, \$9.50 to \$10.
- No. 2 machinery cast, \$10.50 to \$11.
- No. 1 steel scrap, \$10.50 to \$11.
- Tram car wheels, \$10.50 to \$11.
- Standard car wheels, \$12 to \$12.50.
- Light cast and stove plates, \$9 to \$9.50.

The Birmingham Realty Co. has announced its plans to erect for the Tyler Grocery Co. a four-story brick wholesale house 100x185 feet, to cost \$50,000. The building will be located facing on First avenue and 15th street, and running back to the tracks of the L. & N. Railroad Co. The L. & N. Railroad Co. recently removed its shops and roundhouses from this locality to Boyles, and have spent several thousand dollars putting in team tracks and other facilities looking to the time when they shall serve a large wholesale district between 14th and 17th streets. This decision on the part of the realty company practically turns the wholesale district in a southwesterly direction instead of southeasterly, as has been the case in wholesale house construction for the past several years.

MISSISSIPPI MUD LUMPS.

Huge Deposits of Clay at the Mouths of the River.

The territory within a mile or two of each of the mouths of the Mississippi is characterized by large swellings or upheavals of tough bluish-gray clay, to which has been applied the name "mud lumps." Many of these mud lumps rise just offshore and form islands having a surface extent of an acre or more and a height of 5 or 10 feet, but some do not reach the water surface. These mud lumps, in addition to being of importance because of their effects on the channels of Mississippi River, are also of considerable purely scientific interest, for their development is not included in the usual conception of delta growth, and although several theories have been advanced, their cause must still be regarded as uncertain.

To an observer at the mouth of the river the idea that the region is a great dumping ground for a large part of the United States is most impressive. The land is being built out into the sea at an estimated average rate of about 300 feet a year; in some places the rate is much more rapid than in others. In one place in Garden Island Bay the land appears to have advanced 2000 feet in the spring of 1912.

The mud lumps are commonly 20 to 30 rods broad and stand 20 or 30 feet above the adjacent bottom. Their growth occupies from a few hours to several years, and is usually irregular. Generally a mud lump rises in a few weeks or months to a height of 4 or 5 feet above the surface of the water. Then it remains quiet and is beaten down by the waves in the course of a few years. Many of them subside, however, and some disappear overnight. Those that rise slowly are considerably worn before they stop growing, while those that rise more rapidly and in protected places are capped by laminated silt having a maximum thickness of 10 feet.

The stories related by sailors and pilots concerning the mode of growth of the mud lumps are fairly consistent. One man, however, states that the growth of a mud lump was accompanied by a rather loud roar as it rose above the water, and another states that he once saw flashes of light rising from a mud lump, but these statements are very different from the great mass of testimony concerning the lumps, and it seems probably that they are not based on fact.

Among the most conspicuous and impressive features of the mud lumps are the mud springs that are active on many, if not all of them. The discharge from these springs consists of salt, watery mud, and gas—in fact, gas escapes at many places on the surface of the Delta of the Mississippi, the vents appearing to be most numerous and largest on and near the mud lumps, though the rate of flow rarely, if ever, exceeds a few cubic feet an hour. Gas rises in bubbles in all the mud springs, though its rate of issue varies.

It is considered by some scientists that the mud lumps are produced by a gentle seaward flow of layers of semi-fluid clay under the land and the shallow water near the ends of the passes. The mud lumps appear to be the product of flow, because in no other places have such thick bodies of clay been found, and the fact that they occur almost exclusively near the ends of the passes and that they are most active during and after times of high water seem to support this theory.

The United States Geological Survey has issued a report, entitled "The Mud Lumps at the Mouths of the Mississippi," by Eugene Wesley Shaw—Professional Paper 85, Part B—a copy of which may be obtained free on application to the Director of the Survey, Washington, D. C.

TEST FARM RESULTS.

An Interesting Exhibit of the Work by the Central of Georgia Railway Co.

A pamphlet which will be studied with interest and profit by everybody concerned with the improvement of agricultural methods has been published by Vice-President W. A. Winburn of the Central of Georgia Railway Co., setting forth in detail the results of demonstration test farm work on 11 farms along the line of the road in Georgia and Alabama in 1913, the second year of the railway's activities in this line. The 11 farms, which were, respectively, at Goshen, Ala.; Lockhart, Ala.; Meda, Ga.; Monticello, Ga.; Leary, Ga.; Rome, Ga.; Ogeechee, Ga.; Dawson, Ga.; Sterretts, Ala.; Toombsboro, Ga., and Jonesboro, Ga., range from 15 to 50 acres in area and aggregated 396.5 acres. The net profit was \$7335.48, or an average net profit per acre of \$18.50, the net profit ranging from \$200.65 to \$1157.25 per farm and from \$5.02 to \$26.92 per acre. The aggregate value of the crops was \$16,933.55. The cost of making the crop was \$8150.82, of which \$2342.08 was for man labor, \$1306.93 for horse labor, \$2036.96 for fertilizer, \$1529.80 for harvesting, and \$935.05 for seed, marketing, ginning, ties and bagging. For rent \$1447.25 were paid.

The crops raised included cotton, corn, chufas, hay, oats, peanuts, peas, peavine hay, oat straw, peanuts, cottonseed, velvet beans, soy beans, sweet potatoes, sugar cane and sorghum cane.

The pamphlet presents a table showing the number of acres devoted to each crop on each farm, the itemized cost, the yield, the value of the yield and the profit or loss. It is to be noted that only one farm showed a loss, and that was on two crops, and aggregated \$41.61. In a review of the year J. F. Jackson, the agricultural agent of the road, says:

"While all of the test farmers did fairly well, Mr. W. I. Dixon, test farmer at Toombsboro, is entitled to special mention for having made such a large profit on land which was said to be the poorest in the State of Georgia when we began work with it in 1912. He bought it for less than \$5 an acre some three years ago, but we valued it at \$10 this year, and his net profit of \$25.39 an acre equals 254 per cent. on this valuation. Five of the farmers made a crop of greater value per acre than Mr. Dixon, but only one made a greater net profit per acre, because the cost per acre of making his crop was lower than on any of the other farms except Leary, Rome and Ogeechee.

"Cotton, of which we had 140 acres, again shows a larger profit than corn or oats, the average yield being 370 pounds (nearly twice the average yield of our States) and a profit of \$23.41 an acre.

"It is worthy of notice, however, that of the 85 acres we had in oats, 58 were followed by peavine hay, and these 58 acres average a profit of \$18 an acre from oats and \$7.92 an acre from hay, or a total of \$25.92, a larger cash return than from cotton. The total cost per acre of making the two crops was \$26.18, while the cost per acre of cotton was \$30.24, and most of this difference is saving in the cost of man labor, the cost per acre for man labor being \$8.12 for cotton and \$3.99 for the two crops of oats and hay. While the cost of harvesting both crops was a little higher than that of harvesting cotton, the cost for horse labor, fertilizer and rent, for the oats and hay were a little less than cotton.

"If all of the farmers in the territory we serve could average a profit of \$18.50 per acre over and above all expenses and rent, I believe it is conservative to say that they would be twice as prosperous as they are now, yet the methods by which we got these results on the test farms are only ordinarily good methods such as any farmer might use, and there is a possibility of greater improvement in them and much better results.

"We have now made 21 contracts for this year, and will have at least 25 test farms in operation."

Mississippi Livestock.

Illustrating the practical interest in Mississippi in the livestock industry is a letter from Commissioner H. E. Blakeslee of the State Department of Agriculture and Commerce to Capt. J. F. Merry of Manchester, Iowa, in which, referring to the latter's article on livestock in Mississippi, published in the MANUFACTURERS RECORD on February 5, Mr. Blakeslee says:

"On behalf of the people of Mississippi I desire to express to you our sincere appreciation of your deep interest in our future welfare as evidenced on so many

occasions in the past. We are making most remarkable progress along the lines you have been hammering on for so many years. On Friday of this week we expect to carry a party of about 100 out to Greenfield Plantation, eight miles east of Jackson. Within a very few years we expect this place to rank with LaVernet Stock Farm. It is the property of Mr. Dan S. Combs, who has an extensive stock farm at Lexington, Ky., and is in charge of the Lespedeza Farms at Hickory Valley, Tenn. During the International Livestock Show at Chicago Mr. Combs paid \$28,000 for 40 pure-bred shorthorn cows and the champion shorthorn bull of the Toronto Fair of 1913. I give you this as additional evidence of the fact that Mississippi expects to be on the map as a producer of the best livestock in the South. I wish I had time to enumerate for you the number of good stock farms that are being placed in Mississippi since the extermination of the cattle tick."

Panama Canal Tolls.

When the building of the Panama Canal was under consideration in the United States, it was recognized that England had some rights in the matter, or could assert some, as we have asserted the Monroe doctrine. In deference to England's feelings in the matter, it was proposed to have a treaty between the United States and England. Representatives of the two nations met. These were Mr. Hay for the United States and Mr. Pauncefoot for England. The result was the Hay-Pauncefoot treaty, which was ratified in due form by both countries. The treaty seems to have been easily and quickly made, but it transpires that each side looked upon some of the items of agreement with certain reservations the other did not dream of. Each side volunteered the claims that all nations of the world should fare alike in its use of the canal. England now contends that this claim means if American ships are given free passage, English ships must have free passage also; and if English ships are charged tolls, American ships must be charged tolls also. This is in effect asserting that England must have a say in our coastwise trade, and it does not seem reasonable that the United States ever considered letting England into any voice relating to our coastwise trade. One of England's chief reasons for wanting American ships handicapped by toll is, that English interests built and now own the Tehauntepec Railway. It is understood that this railway is doing a very thriving business and is strictly competitive with what the canal may do. There are other reasons why England wants to handicap American coastwise trade, as, for example, she would prefer to see our Transcontinental roads prosper, in which some of her citizens are perhaps interested, than to see American coastwise trade relieved of her handicap.

About 100 years ago, United States and England fought a war because they could not agree about the rights of the two nations on the high seas. After the Revolutionary War, England recognized our full independence on land, but still claimed the right to harass us on the ocean. She made special delays against our ships in English ports. She impressed our seamen when caught upon the high seas, and in many ways harassed our ocean commerce. As a result we fought the war of 1812-15 and made a treaty about our relative rights on the high seas, based upon the idea of reciprocity. Each nation was to make the same charges at the ports for the other nation's vessels as for its own. Everything was to be equalized, yet we have always reserved our coastwise trade for ourselves. England never would have thought of construing that treaty about reciprocity on the deep seas as giving her the right to claim that she should enter our coastwise service on the same terms that we do. Yet there is about as much error in the late Hay-Pauncefoot treaty about tolls for the canal. The equal rights of nations would not seem to include the right to interfere with our coastwise service. We reserve our coastwise service for America only. Without this reservation the service would be open to every nation, and all vessels would have a right to come and ply from city to city upon our coast. What we do about our coastwise service always has been our own concern, and the probabilities are when this treaty was made, the subject of American coastwise vessels was left out of it because it was taken for granted. It would seem beyond reason that America should spend \$500,000,000 in a canal and get nothing whatever out of it.

If England's contentions as to tolls are allowed to prevail, the United States is building a big canal, maintaining it and defending it as much for England as for

the United States itself. On the popular vote there are not 10 per cent. of the people of the United States who would support such a proposition. It would be a handicap to American coastwise commerce purely for the benefit of the Tehauntepec Railway and for whose ever interest is involved for the Transcontinental Railway.

Under the policy of reserving American coastwise shipping for the United States, we have developed a fine domestic trade. If we would let foreigners in it, they would break this up immediately so far as America is concerned. Under the same system we have developed on the Lakes a monumental carrying trade, surpassing all other carrying trades in the world. The trade on the Canadian side is important and well developed, but the coastwise trade of each country is reserved for that particular country. When the canal is finished, its principal use to America will be in the coastwise trade. We should reserve the right to handle our coastwise trade in the future as in the past, as being entirely independent of any rights of England or any other country. In building, maintaining and defending a canal, we are doing much more than collecting tolls from our own ships, and we are doing more for the world. England seems simply to be asking that we handicap ourselves for her benefit by building, maintaining and defending a canal and let her have all the benefits without the responsibilities. If we allow England this privilege, other nations under the "favored nation clause" would want to come in the same.

If we allow England's contention we will have built a canal and assumed all the responsibility of maintaining and keeping it in repair, and yet we propose to handicap our own shipping for the benefit of those who have no responsibilities whatever. If an earthquake should destroy the canal, we would lose the whole of our \$500,000,000. If the canal does not make ends meet, we pay the difference, and other nations get the benefit. I venture the assertion that the subject was never brought up between Mr. Hay and Mr. Pauncefoot, because it was then assumed on both sides that the treaty had nothing to do with our coastwise shipping anyway. It is a question in my mind, whether it was considered that the foreign commerce of the United States would not be free, in view of the large expenditure made by the Government to build the canal and its responsibilities to keep it in repair and operation.

This is not meant here to say that President Wilson and the Congress may not find some way to satisfy England in the matter, without sacrificing American interest; but simply to give up to England's contention so far expressed, would be to sacrifice the very motives which impelled the American people to vote the canal money and to enter upon the undertaking of building it.—D. A. Tompkins in *Charlotte (N. C.) Observer*.

For a Phosphate Association.

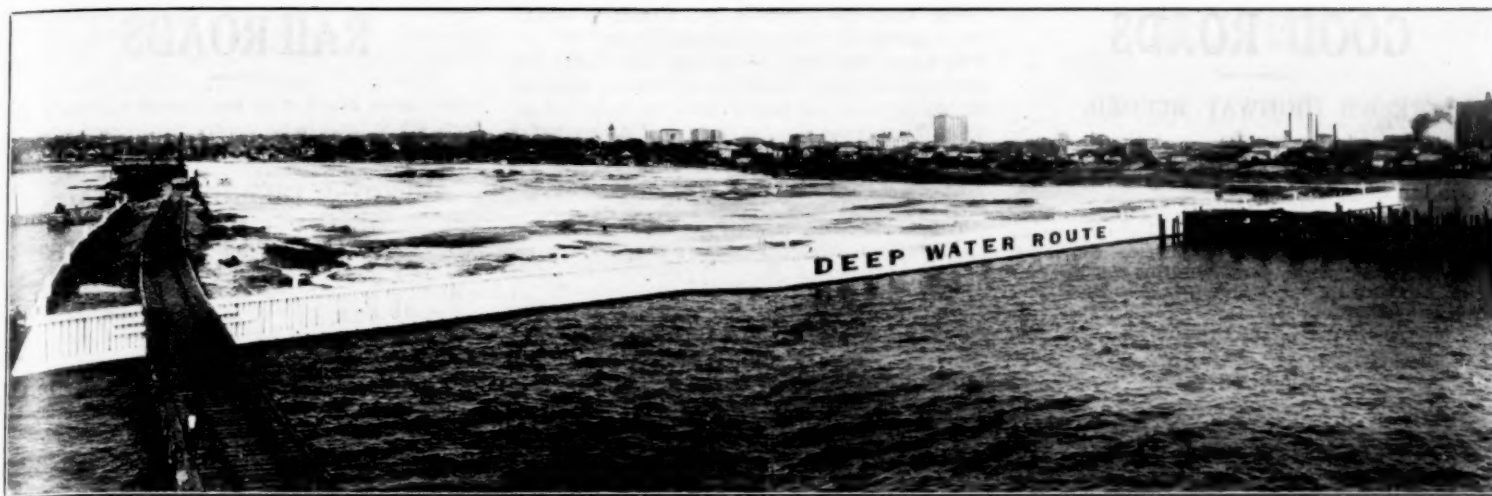
Secretary P. J. Norfleet of the Franklin Phosphate Co., Newberry, Fla., writes to the MANUFACTURERS RECORD:

"As a subscriber to your magazine, it strikes me as being one of the most valuable papers published in the South, and whereas the phosphate industry is one of the most important industries of the South, I want to call your attention to the way the business is now being handled, hoping that it may prove the seed for co-operation between the producers of phosphate rock, and especially the hard rock branch of the industry.

"It is very incumbent upon the producers of phosphate, especially the hard rock miners in Florida, and possibly all the phosphate miners in the South, to form an association in order that we could come together personally at agreed intervals to discuss the best means of mining phosphate rock at a minimum cost and agree on a scale at which the rock can be mined for, with a view of selling whereby the owners of unmined rock and the operators or the mines could at least realize a fair profit on their investment.

"The phosphate industry is the only business of any consequence that is not controlled to at least some extent by an association. The hard rock branch of the phosphate industry has reached the stage where there is no market that would justify any miner to operate. The old cut-throat principle has been practiced until the cloud of failure seems to be hanging over the total industry.

"Would it not be wise for some old and leading company to take the progressive stand and work up an association which each individual or company would only be too glad to become a member."



GULF, FLORIDA & ALABAMA RAILWAY'S MARINE TERMINALS AT PENSACOLA.

The marine terminals of the Gulf, Florida & Alabama Railway at Pensacola, Fla., are being fitted to accommodate vessels of the deepest draft. Back of a bulkhead having a frontage of 700 feet there has been filled in a 32-acre storage yard. Thirty-one feet of water at mean low tide has been provided for the slips serving the piers. The present yard has storage facilities for 600 cars, and ample space is reserved for cotton warehouses, a naval stores yard (with room for practically 250,000 barrels), etc. In addition to the present pier, 1225 feet long, another is nearing completion. This new pier is 100x1225 feet, a portion of which will be shedded for perishable freight. Pier No. 1 is to be widened to accommodate five tracks. Eventually at this present terminal will be four piers, one of which will be a modern coaling dock which will provide facilities for the quick dispatch of vessels up to 31 feet draft receiving either bunker or cargo coal. In addition to the present terminal property, the railroad company owns on the west side of it sufficient property to construct yard facilities for not less than 500 cars, and with a bay frontage sufficient for two additional piers. This terminal is pronounced by railroad men generally to be ideal for quick and convenient handling of the traffic of a large trunk line. In addition to the 32 acres now filled in, the company owns 16 acres which will be developed later, giving about 50 acres of reclaimed land when the whole contract is finished. The reclamation work was done by the Atlantic, Gulf & Pacific Company, which built a special suction dredge with a 20-inch pipe. The Gulf, Florida & Alabama Railway, of which Roy C. Megargel, of Megargel & Co., New York, is president, is now operating 105 miles, and the 50-mile contract north is about 20 per cent. finished. This contract calls for completion to a connection with the Southern Railway near Pine Hill by September 1, including a bridge across the Alabama River, and already contracts have been entered into for northbound freight on this basis. A pamphlet issued by the firm and handsomely illustrated describes 10 months' progress by the railroad and affords an adequate picture of the territory it traverses.

To Encourage Truck Growing.

The Killian Lumber Co. of Valdosta, Ga., writes to the MANUFACTURERS RECORD:

"Sawmilling is our business, but in buying timber locations we oftentimes have to buy the lands in fee-simple. About three years ago we purchased a very fine farm three miles above Thomasville, Ga., in Thomas county, and on the Atlantic Coast Line Railroad. Our friends in Thomas county tell us we have the finest farm in the county, and our neighbors are very progressive white farmers. In order to encourage truck growing and melon raising, we are arranging to erect ourselves a packing-house on our siding to be used free this year by the farmers in assembling and packing their truck.

"The following acreage will be planted and shipped from our siding this year: 198 acres in watermelons, 22 acres in cucumbers, 30 acres in tomatoes and 16 acres in cabbage."

Texas Industrial Congress.

February 21 is Industrial Congress Day at the National Corn Exposition in Dallas, when the annual convention, deferred from December 13 last, will be held and the prize award of \$10,000 for the best profits in the 1913 crop contest distributed to the winners. A program of interest to farmers and those concerned in better farming will be carried out during the day, consisting of addresses as follows: "Some Things the Industrial Congress May Do," by Prof. C. F. Bull of St. Paul, Minn., secretary-manager of the National Corn Exposition; "The Marketing of Agriculture Products," by Prof. Chas. B. Austin of the University of Texas; "Use of Silo in Saving Drought-Stricken Crops," by Prof. C. M. Evans of Agricultural and Mechanical College; "Boys and Girls' Hog Clubs," by Messrs. C. C. French and John A. Stafford of Fort Worth; "Baby Beef Clubs," by Hon. Ed. R. Kone, Commissioner of Agriculture, and Mr. J. Boog-Scott of Coleman; "The Elimination of Waste in Marketing," by Hon. Clarence Ousley of Fort Worth.

The memorial service at night in the fair park Coliseum, in charge of Hon. John H. Kirby of Houston, will consist of the distribution by Governor Colquitt of the prize awards, followed by a series of one, five, ten and fifteen-minute tributes to Colonel Exall by prominent citizens.

Some suggestions have been made as to continuing the work of the congress. One of these is to raise an endowment of \$500,000, the interest being used for prizes and expenses. Another suggestion is to charge contestants an entrance fee to provide the prize fund, and still another is to have a great Henry Exall Memo-

rial Society, with a membership fee of \$2, open to every citizen of Texas, and to give the members in return for their subscription in 1914 a copy of the Henry Exall Farm Book and a memorial medallion, and in ensuing years the yearbooks and other publications of the congress. The difference between the cost of the farm book and medallion and the membership fee will carry on the work if enough men can be found who love the memory of Colonel Exall and desire to perpetuate it in the way he would have chosen. Other plans also have been suggested and will be considered in connection with continuing Colonel Exall's work.

Contracts for Tampa's Sewer System.

Last week the Board of Public Works, Tampa, Fla., awarded contracts for that city's Imhoff sanitary sewer system, for which proposals were recently invited. These contracts aggregate \$660,945.13, and the engineers are Messrs. Twombly & Henney of New York. They were awarded as follows: Sullivan & Greeson—Section 1, \$58,800; section 2, \$17,900; section 3, \$28,413; section 5, \$120,728.88; section 10, \$41,977. Edwards Construction Co.—Section 4, \$33,500. McNeil, Davis & Webb—Section 6, \$110,274.35; section 7, \$81,166.75; section 8, \$136,751.50; section 9, \$31,433.25; all of Tampa.

Cottonseed Crushers and the Tariff.

The Interstate Cottonseed Crushers' Association, Robert Gibson, Dallas, Tex., secretary, has sent to its members through its legislative committee, M. E. Singleton, St. Louis, president, and J. J. Culbertson, Paris, Tex., chairman, a comparison of the tariff schedules of 1909 and 1913 showing the changes in articles, such as chemicals, oils and paints, earthenware and glassware, metals and manufactures, agricultural products and provisions, flax, hemp and jute, wool and manufactures and the free list, in which the association is vitally interested.

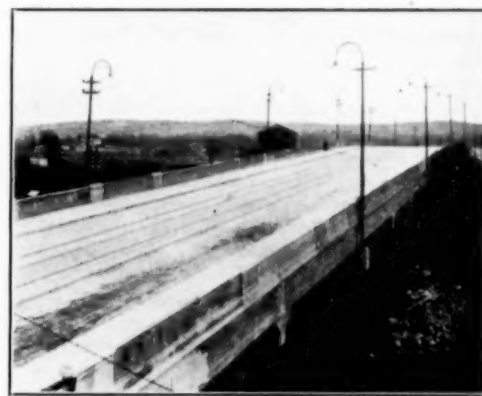
Trackless Trolley and Motor Bus.

The Commercial Club of Webb City, Mo., A. A. Hulett, secretary, has, says a report, received a proposal from builders of trackless trolley cars looking to the establishment of a line between Webb City and Carl Junction. The proposition has been referred to local capitalists.

I. C. Beatty, manager of the Birmingham (Ala.) Realty Co., is reported considering a plan to establish

a motor omnibus line on Fifth avenue to accommodate residents in the extension of the Norwood property.

The Fort Worth (Tex.) Chamber of Commerce has just moved into its new home, which was erected at a cost of \$85,000.



CHATTANOOGA'S NEW VIADUCT.

The city of Chattanooga spent \$20,000 in building the reinforced concrete McCallie avenue viaduct, plus about \$8000 that the street railway company chipped in and \$70,000 spent by the railroads. The viaduct is 735.5 feet long, made up of 21 spans. About 10,000 tons of concrete, including 10,000 barrels of Dixie Portland cement, went into it. In width it is 60 feet, allowing a 40-foot roadway and a 10-foot sidewalk on either side. The clear driveway on each side of the double track for street cars is 12 feet. The entire surface, except sidewalks, is paved with brick. Ornamental posts carry a 108-watt mazda lamp each, furnishing splendid illumination.

The viaduct is all flat-span work. The contractor, the Chickamauga Quarry & Construction Co. of Chattanooga, used towers and chutes in placing concrete in the main work, only the pilasters and handrails being set in place by hand. Steel in the beams is two inches off bottom, there being a little extra allowance in this dimension to prevent fumes from engines passing below to ever get to the steel in event the concrete might wear away a little. In the floor slabs the steel is 1½ inches off bottom. The twisted steel reinforcement, about 500 tons of which was used, varies from ¼ inch to 1½ inches in diameter, according to where placed.

GOOD ROADS

WEEK'S HIGHWAY RECORD.

Progress in Southern Road and Street Improvement.

[Further details of highway undertakings and bond issues mentioned below are given under the headings Construction Department and New Securities, published elsewhere in this issue.]

Bonds Voted.

Bastrop, Tex.—Precinct No. 1 of Bastrop county voted \$50,000 bonds to construct roads.

Dobson, N. C.—Mount Airy township of Surry county issued \$80,000 bonds to construct roads.

Bonds to Be Voted.

Bradentown, Fla.—Manatee county votes March 16 on \$550,000 bonds to construct roads and bridges.

Franklin, Ky.—Simpson county votes April 18 on \$100,000 bonds to improve roads.

Hillsboro, Tex.—Road District No. 2 of Hill county votes February 21 on \$150,000 bonds to construct roads.

McKinney, Tex.—Frisco district of Collin county votes March 14 on \$65,000 bonds to construct roads.

Victoria, Tex.—Road District No. 5 of Victoria county votes March 18 on \$125,000 bonds to construct roads.

Yoakum, Tex.—City votes March 18 on \$40,000 bonds to improve streets.

Contracts Awarded.

Baltimore, Md.—City awarded paving contracts aggregating \$165,000.

Corpus Christi, Tex.—Bishop road district of Neuces county awarded contract for 30 to 40 miles of macadam roads.

Dallas, Tex.—City awarded \$48,000 paving contracts.

Fort Worth, Tex.—City awarded \$52,000 paving contract.

Joplin, Mo.—City awarded \$19,697.30 paving contract.

New Iberia, La.—W. E. Gerens of Remy, La., has \$10,176 contract to construct gravel and earth roadway 4½ miles long.

Richmond, Va.—City awarded contract for 10,000 yards bitulithic paving on Main street.

St. Louis, Mo.—City awarded contracts at \$85,017.28 for street improvements.

Contracts to Be Awarded.

Asheville, N. C.—City and Buncombe county will construct road to cost \$47,000.

Baltimore, Md.—State Roads Commission asks bids until March 3 to build five sections State highway, about 24.95 miles.

Centerville, Md.—Town will pave one mile of street.

Clanton, Ala.—Chilton county will construct 13 miles of State-aid road.

DeQuincy, La.—City receives bids until March 10 to construct 60,525 square feet concrete sidewalk and 14,480 linear feet curb.

Fairmont, W. Va.—Marion county will construct 18 miles of brick and concrete roads in Mannington district.

Galveston, Tex.—Galveston county receives bids until February 25 for 34½ miles road improvements.

Greenville, S. C.—City received bids until February 19 to construct 5000 square yards sheet cement or tile sidewalk paving.

Helena, Ark.—Phillips county will construct 8 miles concrete road.

Houston, Tex.—Magnolia Park Land Co. will construct 48,000 square feet cement sidewalks in Central Park.

Little Rock, Ark.—Pulaski county will construct 6½ miles macadam road.

Lonoke, Ark.—Road District No. 6, Lonoke county, will construct 12 miles macadam road.

Okemah, Okla.—Weleetka township of Okfuskee county will expend \$25,000 during current year to construct 25 miles of road.

Star City, Ark.—District No. 2, Lincoln county, will construct 21 miles of macadam road.

St. Louis, Mo.—City receives bids until March 3 to pave various streets, expending \$22,982 for bitulithic, \$68,158 for brick and \$13,730 for alley improvements.

Sumter, S. C.—Sumter county will build 6 miles of new sand-clay road.

Tampa, Fla.—City opened bids February 17 on 29,610 square yards of vitrified brick paving.

Tampa, Fla.—City received bids until February 17 for 14,700 square yards pavement.

CONCRETE ROAD BUILDING.

Policy Outlined by a National Conference at Chicago.

At its meeting last week at Chicago, the first National Conference in Concrete Road Building adopted the following principles as representing good practice in the construction of concrete roads:

- "1. The aggregate should be clean and hard.
- "2. The sand should be coarse and well graded.
- "3. A rich mixture should be used.
- "4. The materials should be correctly proportioned.
- "5. The materials should be thoroughly mixed.
- "6. The inspection should be intelligent and thorough.
- "7. When in doubt, reinforce the pavement.
- "8. The subgrade should be of uniform density, thoroughly compacted and drenched with water immediately before placing concrete.
- "9. The concrete should be of a viscous plastic consistency.
- "10. After placing, the concrete should be immediately covered and kept moist and not opened to traffic for four weeks."

Concrete is a building material of great value in the economical construction of highways, buildings, bridges and other structures; its rapidly increasing use is of great importance in the permanent developments in each State, and the quality of the sand, gravel and stone available in the various localities in each State are of fundamental importance, and have not yet been extensively determined. It, therefore, resolved that it is highly desirable that the materials available in the various States for use in concrete should be examined and tested as rapidly as possible by competent State geologists, universities or engineering experiment stations, and that the Governor and the Legislature of the several States be asked to seriously consider the great necessity for making adequate provision and appropriation to the proper agency for the prompt inauguration of such investigations.

\$1,075,000 Bonds Voted for Roads.

Probably the largest amount of bonds ever voted by a Southern community for road construction is that announced in dispatches from Waco, Tex. These dispatches state that Justice precincts 1 and 3, including the city of Waco, and 17 precincts in McLennan county, in which Waco is located, have voted affirmatively on the recently mentioned proposed \$1,075,000 bonds for the construction of roads. The McLennan County Commissioners will be in charge, and will at once arrange to have the bond issue approved by the State officials, so that the securities can be offered for sale, and that the extensive road work made possible by the large amount of \$1,075,000 can be promptly undertaken. This is another evidence of the determination of the people of Texas to remain in the forefront of action for modern highways in their State.

To Oil 420 Miles of Road.

An unusual contract, largely because of its extent, will be awarded for Maryland roads, and the proposals are to be opened on February 26. It calls for oiling eight sections of State highway, about 420 miles, requiring about 1,225,000 gallons of oil. The State Roads Commission, O. E. Weller, chairman, Garrett Building, Baltimore, will furnish specifications and open bids.

The Electrical League of Cleveland, O., William G. Rose, manager, is planning an electrical exposition for that city in May next.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

IMPROVED FREIGHT TERMINALS.

Southern Railway Completes Station Building and Yards at Chattanooga.

The Southern Railway at Chattanooga, Tenn., to meet the demands of increasing business, has spent about \$125,000 in extending its freight terminals. All excepting about \$18,000 was expended on yards in the heart of the city, and the rest at the Citico yards, on the outskirts.

The integral units of the terminal arrangements, with the improvements practically completed, are as follows: Pillar crane on platform alongside track for handling machinery and other very bulky freight; automobile unloading platform, with complement of trackage; driveways for drays unloading freight to outbound station; outbound station; tracks for outbound freight; tracks for inbound freight; inbound freight station; driveway, and main line of freight tracks.

The outbound freight station is an entirely new building; the inbound freight station is the old building, remodeled and repaired adequately. In the instance of both these buildings an unoccupied space has been left at the eastern extremity so that as soon as growth of business warrants they can be extended. About three miles of new tracks have been laid.

The new station is 34 feet wide and 250 feet long. It has a foundation of 24-inch concrete walls and 6-inch concrete granolithic flooring. The framework is of steel. The two-inch concrete roof is covered with a composition roofing. There are no side walls, the only enclosures being rooms for check clerks and a small "over-freight" locker-room. The platform is equipped with three dial scales and one beam scale. All buildings are provided with standard fire hydrants, of which there are two in each depot and three on each platform. Two frame platforms have also been constructed, each 14 feet wide, one being 528 feet long, the other 517 feet. They are on concrete piers, and have composition roofing.

Tracks serving the inbound and outbound freight houses afford sufficient space for the loading and unloading of 100 merchandise cars daily. Public team tracks afford space for placing 50 cars for loading and unloading.

A brick pavement, averaging 35 feet in width by 115 feet long, has been installed as an approach to the machinery and heavy freight platform. Adjoining is a tar-macadam pavement, averaging 32 feet in width and 200 feet long, approaching the automobile platform, 80x16 feet. There is one track on each side of each platform, making it easy to unload heavy machinery and handle direct from the platforms to wagons. These two pavements, running through from Newby to King street, form avenues for city traffic, the public beginning to make use of them as soon as they were completed. Adjacent to the paved driveways there is trackage space for 110 cars at one time, all tracks being laid with 80-pound rails and provided with latest improved switches. Each driveway has a sewer and drains, so that surface water is carried off immediately. Also, wherever two adjacent tracks run parallel for any distance, a line of six-inch terra-cotta pipe was laid between the tracks, with open joints. The joints are surrounded with cinders, which act as filters.

The tract occupied by the improved terminals is irregular in shape, beginning at Newby street and continuing in a sweeping curve to King street (where the track changes have been made) and beyond. Newby street runs, practically north and south.

The construction was under the charge of S. D. Moses, assistant to the district engineer of the Southern Railway.

PIEDMONT & NORTHERN.

J. B. Duke Expected to Soon Begin Construction of Another Extension.

J. B. Duke of New York, president of the Piedmont Northern Lines; Samuel McRoberts, also of New York, and E. Thomason, general manager of the electric inter-urban railway, says a report from Spartanburg, S. C.,

have made the first trip over the extension from Greenville to Spartanburg, 32 miles, which is now being completed. It is also announced that a regular schedule will be established over the extension by March 1.

Mr. McRoberts, who is interested with Mr. Duke in the Piedmont syndicate, is a vice-president of the National City Bank of New York, and his visit to the Carolinas has given rise to reports that further construction is contemplated by the railroad. Now that Spartanburg is reached, there are expectations that the next step will be to build between that city and Gastonia, N. C., about 50 miles, thus connecting with the Piedmont Northern line from Charlotte, which, like the line from Greenville to Greenwood, S. C., has been operated for some time.

While this construction would be quite expensive, it is understood, because of the nature of the country to be traversed, it would have the very desirable result of connecting the northern and southern parts of the Piedmont system. No announcement has yet been made to indicate an early start on the additional extension, but the company recently took the necessary legal steps to increase its capital stock from \$5,000,000 to \$15,000,000. W. S. Lee of Charlotte is the vice-president, and in active charge of the property.

Beaufort to Cape Lookout.

The Seabeach Railroad Co. has been chartered at Raleigh, N. C., with headquarters, it is stated, in the office of Winston & Biggs, Citizens' Bank Building, for the purpose of building a line 14 miles long from Beaufort, N. C., to Cape Lookout. Its capital stock is \$275,000 authorized and \$15,000 subscribed. The incorporators are C. J. Becker of Wilmington, N. C.; George P. Westervelt, James Hodges and Herbert G. Lord, Jr., of New Jersey. It is further said that the purpose of the company is to develop a shipping port and a seaside resort at the Cape.

In connection with this news it is interesting to remember that Beaufort is a terminus of the Norfolk Southern Railroad, which has been expected to build any extension to Cape Lookout which might be necessary, but it is understood that the Norfolk Southern is not connected with this proposed construction. Several years ago it was currently rumored that a railroad to the Cape would be built, and now greater interest in the place and its possibilities is awakened because the United States Government is preparing to erect a breakwater and provide a harbor of refuge at a cost of about 1,400,000. To build a railroad from Beaufort would demand the spanning of the waters of Back Sound, and consequently considerable expense for bridging.

\$3,663,000 Railroad Mortgage.

The Alabama, Tennessee & Northern Railroad Co. has filed a mortgage for \$3,663,000 at Mobile to secure bonds, with the Guaranty Trust Co. of New York as trustee. It was locally reported that the railroad company proposed to build its long-expected extension from Calvert, Ala., to Mobile, about 35 miles, but President John T. Cochrane is quoted as having said about the purpose of the bond issue only the following:

"The recording of the deed of trust is simply one step in the consolidation of our properties, arrangement for which was made some time ago, and while everything was ready for recording, it was not done until this time because none of the bonds were offered for sale. There is not anything further that we care to state at present which is of interest to the public."

The Cochrane properties are the Alabama, Tennessee & Northern Railroad, the Tombigbee Valley Railroad, which being now connected are practically one line, and the Mobile Terminal Railroad. Merged, they will be known as the Alabama, Tennessee & Northern Railway. It is stated that the mortgage represents property valued at \$25,000,000.

Two Street-Car Plans.

Miami, Fla., has two street-car service plans awaiting development, say reports from there. One of these is the proposition of the Miami & South Florida Interurban Railway Co., which, according to a statement quoting Don C. Caddagan, secretary, has made arrangements with a large operating company, whose name is not disclosed, for the completion and operation of 2½ miles of track within a year if a suitable franchise is

granted. Application will be made immediately to the City Council. A bond of \$10,000 is to be offered by the company to guarantee fulfillment of its promises. Either electricity or gasoline may be used for motive power. Tracks will be standard gauge.

As for the other proposition, the promoters of which are not named, it is stated that three gasoline motor buses the size of street-railway cars will be delivered in Miami within six weeks and will be operated as soon thereafter as arrangements can be made to conduct business. Suburban development enterprises are expected to meet the expenses of the bus line until it becomes self-supporting.

South Florida & Gulf.

F. B. Lynch of St. Paul, Minn., president of the Southern Colonization Co., according to a report from Kissimmee, Fla., has organized the South Florida & Gulf Railroad Co. for the purpose of building a line about 36 miles long from Kenansville, near Whittier, Fla., to Bassenger, all of the stock being subscribed. There are, it is further stated, 25 miles of graded railroad bed out of Kenansville, which can be used for the line, and sufficient ties for 12 miles of track are on hand. Construction contracts have been let to M. Reed and others, and work is expected to begin within a few days upon arrival of rails.

The officers of the railroad company are C. H. Armstrong of Rochester, Minn., president and chief engineer; Walter F. Schrock of Shokopee, Minn., vice-president; Henry F. Beaulter of Kissimmee, Fla., secretary and treasurer. Capitalization is \$500,000. Application for charter is to be made immediately. The line has been projected for a couple of years.

Freight Station at High Point.

The Carolina & Yadkin River Railway Co., according to a report from High Point, N. C., has broken ground for the erection of its freight station there, having recently extended to that place. The station, which is to be finished in about two months, will be 400 feet long and 60 feet wide. Grading of the terminal road is nearly done, and spurs are being built to various industries.

New Equipment.

Illinois Central Railroad is reported in the market for 70 locomotives.

Pennsylvania Railroad has ordered 300 tons of bridge steel from the Phoenix Bridge Co., Phoenixville, Pa.

Texas & Pacific Railway is reported contemplating ordering 15 locomotives, besides from 1500 to 2000 box and gondola cars.

Railroad Notes.

The Southern Railway Co., it is announced by F. S. Wynn, secretary, has declared a dividend of 2½ per cent. on its preferred stock, payable April 24.

The Norfolk Southern Railroad, according to a report from New York, has sold \$600,000 of 5 per cent. first mortgage and refunding bonds to Harris, Forbes & Co., and the proceeds will be used for additions, improvements, etc.

The Norfolk & Western Railway Co. announces the appointment of C. S. Churchill as "assistant to the president in immediate charge of Federal valuation;" also the appointment of J. E. Crawford to be chief engineer to succeed Mr. Churchill.

The Kansas City, Clay County & St. Joseph Electric Railway Co. has been authorized by the Missouri Public Service Commission to issue \$135,000 of bonds, the proceeds of which are to be used to cover the cost of installing an automatic signal system from Kansas City to St. Joseph.

A \$7,000,000 Coal Company

Capitalized at \$7,000,000, the King-Pocahontas Coal Co. of Vivian, W. Va., has been incorporated by Lewis H. Freedman, Albert T. Maurice, Daniel D. Murray, Wm. D. Tucker and John Ferguson, all of 54 Wall street, New York.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

Electrical Machinery for Cotton Mills.

Profile Cotton Mills, Jacksonville, Ala., will place in its power plant a 250 K. V. A. alternating-current generator; Franklin Cotton Mills, Concord, N. C., will add to its electric drive equipment five 20-horse-power motors, with auto switches and a switchboard; Corriher Mills, Landis, N. C., will install for electric drive 11 motors ranging from 2 horse-power to 25 horse-power, switches, switchboards, etc.; Dunn Manufacturing Co., Gastonia, N. C., will add for electric drive 23 motors ranging from 5 horse-power to 35 horse-power, switches, etc.; Proximity Manufacturing Co., Greensboro, N. C., will install five additional 25-horse-power motors and oil switches. All this electrical machinery has been ordered from the General Electric Co., Schenectady, N. Y.

Greenville Cotton Mills.

The Greenville (N. C.) Cotton Mills, previously reported as organized, etc., has awarded building contract to the Gallivan Building Co., Greenville, S. C. This work includes the following: 316x80-foot mill building; 80x70-foot ell; 100x75-foot storage warehouse; 150,000-gallon reservoir; 50,000-gallon tank, 50 feet high; these will cost about \$35,000. This mill company will have 5000 spindles, 200-horse-power steam plant, etc., for manufacturing hosiery yarns. It will soon award the contracts for machinery and for building cottages, power-house, etc. R. C. Biberstein, Charlotte, is the architect-engineer in charge.

Appalachian Mills to Spin Yarns.

The Appalachian Mills, Knoxville, Tenn., mentioned last week as having purchased the Holston mill and planning to improve it for yarn spinning, will install 10,000 spindles and a 600-horse-power plant, with other accompanying machinery, to cost approximately \$150,000. This equipment will have a daily capacity of 75,000 pounds of cotton yarn, and about 200 operatives will be employed. Bids for the machinery will be opened on April 1. This Appalachian company now operates 60 knitting machines, 200 sewing machines, dyeing equipment, bleaching apparatus, finishing machinery, etc., by electric power, employing 400 operatives on the production of men's cotton ribbed underwear.

Avalon Mill for Hosiery.

A daily capacity of 1200 dozen pairs of hosiery will be provided for the Avalon Mill, which has been organized as a branch of the Elizabeth City Hosiery Co. of Elizabeth City, N. C. This new company will erect a brick and steel building 120 feet long by 60 feet wide, costing about \$6000, and install 160 knitting machines, with electric power drive costing about \$25,000, about 150 operatives to be employed. J. W. Martin is the architect, engineer and contractor in charge. D. B. Bradford is president, with J. A. Kramer as vice-president and P. H. Williams as secretary-treasurer.

A \$50,000 Knitting Company.

Capitalized at \$50,000, the Rogersville (Tenn.) Knitting Mill Co. has been incorporated for the purpose of establishing a plant to manufacture hosiery and other knit articles. The incorporators include W. D. Harmon, H. G. Kyle, J. O. Phillips, Gale P. Kyle, J. B. Murrell, J. Fred Testerman and J. Rod Armstrong. It was recently stated that plans were being formulated for a knitting company at Rogersville.

Century Knitting Mills.

The Century Knitting Mills, Old Fort, N. C., referred to last week as to construct a 150x75-foot building and install 100 knitting machines, has effected organization, and the capital is \$125,000. Officers have been elected as follows: F. A. Lukin, president; C. F. James, vice-president and manager; F. M. Bradley, treasurer. This company is now endeavoring to complete arrangements for building and machinery.

To Install 5000 Spindles.

The Chadwick-Hoskins Company, Charlotte, N. C., has awarded contract to the Mason Machine Works, Taunton, Mass., for 5000 spindles to be installed for replacing warp frames in its No. 5 mill at Pineville. This Charlotte company is capitalized at \$2,000,000, and manufactures white sheeting, its various mills containing about 98,000 ring spindles and 2800 broad looms.

A 10,000-Spindle Addition.

The Ozark Mills, Gastonia, N. C., will soon complete its additional building, previously announced. This building will be three stories high and 100x75 feet long, to be equipped (as heretofore stated) with 10,000 spindles and accompanying machinery. Contracts for this equipment have been awarded. J. A. McAllister of Gastonia is the building contractor.

The Cotton Movement.

In his report for February 13 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 193 days of the present season was 12,108,666 bales, an increase over the same period last year of 680,563 bales. The exports were 6,536,567 bales, an increase of 65,984 bales. The takings were, by Northern spinners, 1,828,070 bales, a decrease of 107,439 bales; by Southern spinners, 2,157,610 bales, an increase of 297,523 bales.

Textile Notes.

Highland Cotton Mills, C. W. Johnson, president, Charlotte, is reported as seeking 800-acre site for construction of a large cotton mill and mill town.

A. A. Shuford-Mill Co., Hickory, N. C., will add 1200 new spindles and preparatory equipment, having awarded contract for this machinery.

Jennings Cotton Mills, Lumberton, N. C., will install 2000 additional new spindles, and contract has been awarded for the new machinery.

The Coosa Manufacturing Co., Piedmont, Ala., will install tape-drive frames to replace 22 spinning and 11 twister frames of old type, contract for this new machinery having been awarded.

The Whitehead Hosiery Mills, Burlington, N. C., has completed its building, 170 feet long by 45 feet wide, and into it has removed the machinery of its former building, besides installing some additional equipment. The company has 250 knitting machines, 50 ribbers, 45 loopers, individual electric motor drive, etc.

The Knoxville (Tenn.) Spinning Co. will add new machinery costing about \$6000, including 1300 spindles and 2 speeders to increase weekly capacity about 3000 pounds of cotton hosiery yarns. The Whitin Machine Works, Whitinsville, Mass., is furnishing the spindles, and the Woonsocket (R. I.) Machine & Press Co. the speeders.

Longleaf Pine Seeding.

Forest officers who have just returned from the Southern States say that 1913 was the best seed year for longleaf pine for a long period of years, and that throughout its range the tree produced a full crop of seed. This is said to be particularly noteworthy because the species matures seed no oftener than from six to eight years, and often at longer intervals. In many sections the seed last year was so abundant that it collected in little heaps in ruts and other depressions.

Not only was the seed crop abundant, but weather conditions were unusually favorable, and by early December most of the seed had germinated and little seedlings two or three inches high are now growing in great numbers. In some cases, however, there was insuffi-

cient moisture during the fall, and the seed lying over the winter will germinate early this spring.

Throughout Louisiana, Mississippi and Eastern Texas many thousands of acres of longleaf pine forests are now carpeted with these seedlings. Counts made in December by the State Conservation Commission of Louisiana showed groups of seedlings as far as 300 feet from the nearest seed tree. Longleaf pine seed is relatively large, but it bears a filmy wing which causes it to revolve spirally when it is dropped from the cone, so that if winds prevail at the time the seeds are released they may be carried for considerable distances.

The reason forest officers are calling attention to the abundant seedling growth is that they may bring home to the owners of longleaf pine woodlands the peculiar need at this time for protecting these woodlands from fire. They point out that it would cost from \$5 to \$10 an acre to restock by artificial means what nature has done gratuitously this last fall, and emphasize the fact that the owners of longleaf pine lands, where natural reproduction has taken place in this way, should not fail to fight fires vigorously this season, and as many seasons thereafter as possible.

It is a common belief in many parts of the South that longleaf pine will not reproduce itself. This belief has arisen, the foresters say, through a combination of the relatively rare seed periods and the annual recurrence of fires which run over the ground and destroy both the seed and such little trees as may start. The thick bark of the mature longleaf pine makes it comparatively fire-resistant, but tender young trees are readily killed, and consequently the necessity for protecting them in a critical year like the present is particularly urgent.

Slemp Consolidated Coal Co.

The Slemp Consolidated Coal Co., capitalized at \$2,500,000, has been organized at Paintsville, Ky., as a merger of the Kentucky Consolidated Coal Co., Italy Coal Co., Letcher Coal Co., Henry Coal Co. and Slemp Coal Co. Its properties include 100,000 acres of coal land in Letcher, Perry, Leslie and Knott counties. Officers as follows: C. B. Slemp, president; Big Stone Gap, Va.; John C. C. Mayo, vice-president; Geo. F. Cope-land, secretary; John E. Buckingham, treasurer; each of Paintsville.

Cloth, Leather, Shoes, Etc.

Francois & Michel Leonidas, Agents Generaux De Plusieurs, Smyrna, Turkey in Asia, write to the MANUFACTURERS RECORD as follows:

"We request you to recommend us some firms of cloths, serges, tweeds, stuffs, leathers and shoes, just as of calves and kids, and, as we would not like to lose a lot of time owing to the distance that separates the two countries, you may instruct the firms in question to forward us immediately their respective samples and lowest prices possible for remitting them our orders."

For Manufacturing Soap.

Luis G. Ramirez, Apartado 21, La Piedad, Mich., Mex., writes to the MANUFACTURERS RECORD as follows:

"Put me in communication with the company that produces a reactive to be added to oil for making soap. I heard that this reactive is patented in the U. S. A. I want to be able to erect a soap-making factory in this town, and I need to make a study about the business. I beg you to put me in touch with the right party."

Papier-Mache Fire Buckets.

"Cromil" Engineering Co., Ltd., Floor A, Milburn House, Newcastle-on-Tyne, England, writes to the MANUFACTURERS RECORD as follows:

"Please put us in communication with makers of papier-mache fire buckets for electrical purposes."

Flax and Rope Machinery.

Vittore Ravizza, Corso S. Celso, 42, Milan, Italy, writes to the MANUFACTURERS RECORD as follows:

"The American machinery that interests us is the rope manufacturing machinery and the flax skotching and braking machinery."

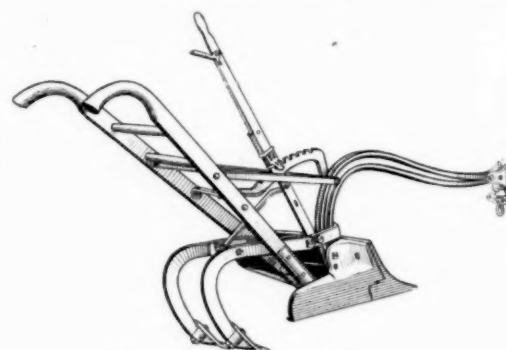
MECHANICAL

Illustrations and descriptions having news value pertaining to developments in machinery, mechanical devices and inventions will be considered for use in this department.

Attachable Subsoil Plow.

In order to provide means of subsoiling without re-plowing and the use of additional team, the subsoiling attachment shown in the accompanying illustration is supplied by the Virginia-Carolina Subsoil Plow Co. of Roanoke, Va. The attachment is a development by J. M. Hodges, patentee.

The advantages of subsoiling are well known, and it is believed that the form of such subsoiling as done by this attachment is particularly desirable, as the lower soil is not thrown up on the richer plowed soil, but is



ATTACHABLE SUBSOIL PLOW.

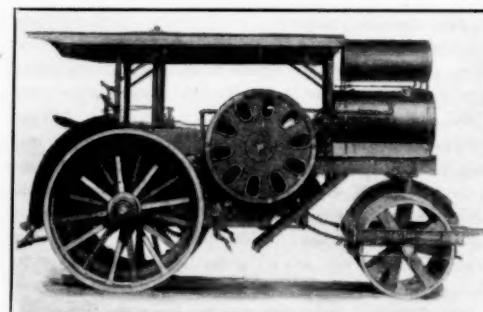
simply broken up, thus creating a holding medium for rain or irrigation water. In time of drought the plants are able to receive moisture from the broken subsoil. Again, the richer soil becomes deeper from year to year by the addition of plant food to the broken subsoil, so that increased production results.

The subsoil device is adjustable so that the subsoil may be cut from one inch to six inches, as preferred. The saving as compared with the use of regular subsoil plow, with plowman and team, is apparent.

Kerosene Combination Tractor-Roller.

By the development and introduction of a patent friction transmission, the Ohio Tractor Manufacturing Co., Marion, O., has simplified the operating of its tractor and road roller so that it may be operated ahead, or reverse, or neutral, without interfering with the direction of running of the engine.

In its Kerosene Combination Tractor-Roller, shown in the illustration, the equipment is economically run by



KEROSENE OPERATED TRACTOR-ROLLER.

kerosene, and operates as a tractor or road roller, as desired. The roller may be easily removed and tractor wheels substituted. The Ohio Tractor-Roller Sales Co., Brunson Building, Columbus, O., and 50 Church street, New York, handles the sales of these tractor-rollers.

In addition to the advantageous features noted, the tractor is fitted with friction steering gear, which is stated to have proven simple and efficient. The two sizes are the 30 and the 50 horse-power, with two cylinders in each case. The tanks shown in the illustration are for cooling water 90-100 gallons, kerosene 60-90 gallons, and a small tank for gasoline.

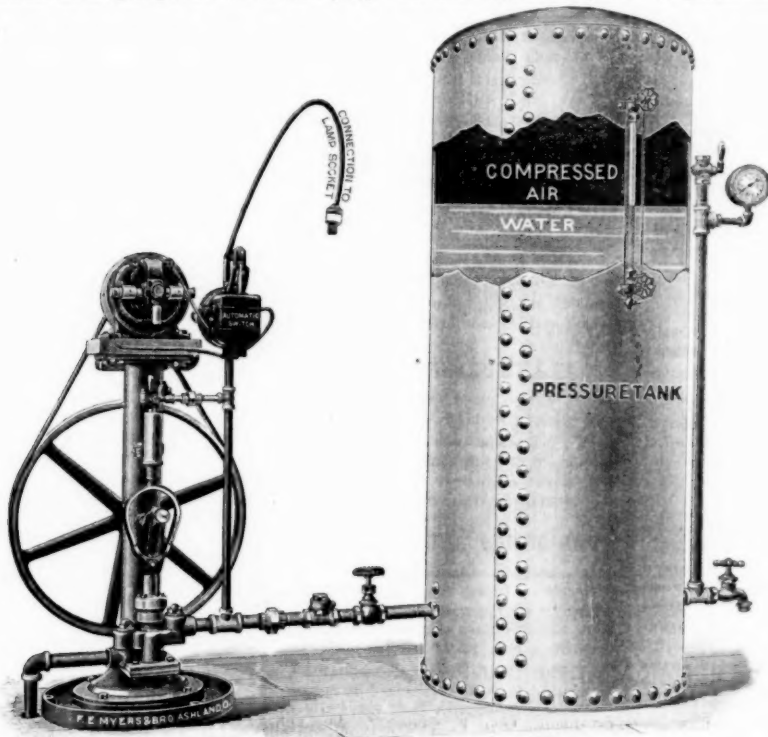
The equipment is shown in detail, with descriptions, specifications, dimension tables, etc., in the pamphlet issued by the Ohio Tractor-Roller Sales Co.

Myers Electric House Pump.

The new electric pump designed to be operated by a small electric motor for service in connection either with open tanks or pneumatic pressure tanks, is now extensively manufactured by F. E. Myers & Bro., Ashland, O., and is shown in the accompanying illustration. It will pump water and air through the same discharge pipe at the same time if desired, or it will pump water alone. It is stated that the entire equipment, mounted on one base, requires very little floor space. The pump is furnished either with or without the air compressor, motor and electric pressure controller.

In its construction the plunger is made of brass, 1 1/4

third of their length and provided with nuts adjusted to both upper and lower sides of the cylinder bearings. When it is desirable to increase the stock space, a block of suitable material is placed between the ram and pressure bed. The upper nuts are then set to the desired point and the pressure applied. This action raises the cylinder to these nuts. When the work is of such character that it requires a smaller working space, the block is kept between the ram and pressure bed and the lower nuts adjusted to the point desired while the pressure is still applied. The pressure is then released, which relieves the strain on the upper nuts. This action lowers the cylinder down to the point desired. The upper nuts are then adjusted to place. To permit the raising and



MYERS ELECTRIC PUMP WITH PNEUMATIC TANK.

inches in diameter; the valves are brass, bevel ground, with brass seat; the belt pulley is 20x1 1/2 inches; the stand is fitted with a hardwood board, to which any make of motor may be attached; the speed is from 100 to 135 revolutions per minute; the air cylinder is cast brass, neatly bored and polished; the air is controlled by moving a lever so arranged that when set in horizontal position it pumps air into the tank through the water line, and when set in a vertical position the air is cut off. The motor required to operate the pump is one-sixth horse-power, and it may be driven direct from a lamp socket.

The pump connected up complete, with tank as shown in the illustration, indicates the manner in which these outfits are usually installed. The motor will operate the pump against 60 pounds pressure. It may be furnished with an electric pressure controller, by means of which the controller automatically stops the motor at any given pressure, and starts it again at any lower pressure desired. The equipment is designed particularly for use where water is pumped from shallow wells and it is desired to have a complete water system with good pressure.

It is stated that there has been a growing demand for pumps of this type, and that the field for marketing it is extensive, as it may be handled by electrical supply houses, electric lighting companies, plumbers and other household supply dealers. The company is equipped to furnish the outfit complete direct from its stock, with electric motor and automatic switch, although it is stated that more particular interest is given by the company in the manufacture of the pump.

Structural Steel and Bar-Straightening Press.

A new design of hydraulic press recently built by the Hydraulic Press Manufacturing Co., Mt. Gilead, O., for straightening structural steel, bars and shafts, has been found valuable for a wide range of work in machine shop service, such as bending, forcing, forming, branching, etc.

The stock space of the press has a variation of 28 inches, from 20 inches minimum to 48 inches maximum. The strain rods are threaded on the upper ends to one-

lowering of the cylinder the pipe connections are provided with swing joints.

The slots are provided in both the ram head and press bed for attaching bending blocks, forms or dies. The press bed permits maximum centers of 72 inches for bending, and permits the use of an overhead crane in placing structural steel and other heavy material on it. The press bed is constructed with a hole in its center, to be used for broaching work and for forcing wheels on and off shafts, axles, etc.

The pressure capacity of the press is 250 tons. The diameter of the ram head is 20 inches, and the run is 20 inches. The length of the press bed is 72 inches over all, and the width of working space is 26 inches. Steel is used throughout in its construction.

The four-way poppet operating valve used in operating applies the pressure to either the main pressure ram or the return ram working in the pull-back cylinder, and at the same time permits the water or oil used in operating the press to return to the pump reservoir from the cylinder on which the pressure is released. The valve is operated by a single lever with three positions: pressure on main pressure ram and release on return ram, pressure on return ram and release on main ram, and the neutral position holding pressure with the rams at any point in their travel in a stationary position. A five-way high and low pressure double-acting balanced poppet operating valve is furnished if desired.

Electromobile Industrial Truck.

To meet the demand for a storage battery truck for use by industrial plants, on storage docks, about railroad stations and in other similar fields of use, the Electromobile Co., St. Louis, Mo., has developed and placed on the market the Electromobile industrial truck shown in the accompanying illustration.

The truck is operated by a storage battery mounted under the platform in a cradle hung between frame side channels. The current from the battery is supplied to the motor hung between spacers on a shaft extending across the frame. A Morse silent chain drive, manufactured by the Morse Chain Co., Ithaca, N. Y., connects

the motor pinion with a gear affixed to the differential, which joins a countershaft in one unit. Self-aligning ball bearings in dustproof mountings are supplied.

The batteries are so wired and arranged that they may be easily raised up and out of the truck, and extra battery installed if desired to operate continually for 24 hours. The truck has ample capacity for an ordinary day's work on one charge.

The truck cannot be started unless the operator stands upon the foot pedal, conveniently situated on the platform. Standing upon this foot pedal pushes off a spring which normally holds tight the brake band upon the drum of the differential, and it also depresses a lever that closes a switch contact in the controller, allowing current to pass to motor, and at the same time releasing the brake. Raising the foot off the pedal disconnects the current, sets the brake and stops the truck. A charging plug of standard make is conveniently situated on the side of the truck directly under a maximum capacity fuse which is wired directly at the battery to take care of any possible short circuit.

The Electromobile truck is built in several sizes to accommodate various requirements. The type "E" shown in the illustration is built for freight car and indoor use. Its speed is five miles per hour, and it is designed to turn in a very small radius. Another type is made for yard use or about large buildings where limited space is not the main consideration. The trucks have cast-steel wheels 20 inches in diameter, fitted with Timken roller bearings made by the Timken Roller Bearing Co., Canton, O. Solid rubber tires are used on all wheels. The tires, in connection with springs, eliminate shocks to the truck.

The trucks are capable of carrying 2000 pounds, and will pull from 4000 to 8000 pounds on a trailer. Trucks of 4000 pounds carrying capacity are built on special order, but it is believed that a capacity of 2000 pounds is most desirable for general use. The trucks can also be equipped with steel tires mounted on rubber. These tires will last longer than rubber tires, and operate at slightly less speed. Special wheels with 16-inch rubber tires may be supplied to make a platform approximately 20 inches from the ground, the same as standard platform trucks in common use. The "Exide" group of batteries, as made by the Electric Storage Battery Co., Philadelphia, Pa., are used with this truck.

The type "E" truck weighs 1650 pounds, with 60 per cent. over the rear axle. A specially-made rheostat for this truck, manufactured by the Cutler-Hammer Manufacturing Co. of Milwaukee, Wis., is furnished, so de-



ELECTROMOBILE TRUCK HANDLING BRICKS.

signed as to charge at three rates by means of a single pole switch touching three contacts. The rheostat has a self-closing low-current cut-out to save the battery from discharging into the line. A rise of the line voltage restarts the current, thus insuring the charging of the battery.

Specifications, illustrations and detailed descriptions of the various types of Electromobile trucks are given in a pamphlet recently issued by the company.

Automobile tire manufacturing machinery to cost \$60,000 will be installed by the Texas Climatic Tire Manufacturing Association, recently incorporated with \$150,000 capital at San Antonio, Tex. This company will erect a 150x175-foot building costing \$20,000, to contain the mechanical equipment, having a capacity of 100 tires in 10 hours. Officers are as follows: Chairman, J. A. Graham; secretary, F. T. Parks; treasurer, E. H. Wicks; manager, A. W. Knight.

Construction Department

IN ORDER TO FOLLOW UP

Properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.

All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.

BRIDGES, CULVERTS, VIADUCTS

Ala., Birmingham.—Jefferson County Commissioners are reported to construct \$40,000 bridge to replace Jasper Ford bridge.

Ala., Cordova.—Walker county will construct bridge across Warrior River at Cordova. Address County Commrs., Jasper, Ala.

Ala., Lafayette.—Chambers County Commissioners will grade, drain, build concrete piers and abutments for bridges and erect steel for same with wooden floor complete along 11 mi. Dudleyville road; expenditure, about \$32,000; bids until Feb. 17; plans and specifications in office of J. J. Robinson, Jr., Probate Judge. (See Machinery Wanted.)

Fla., Fernandina.—Nassau County Commissioners, J. W. Keen, Chrmn., will erect riveted plate girder drawbridge across Kingley's Cut, Amelia River, on Fernandina and Jacksonville Rd.; bids at Courthouse Feb. 18; Edwin R. Williams, Clerk of Circuit Court. (See Machinery Wanted.)

Fla., Melbourne.—Brevard County Commrs., J. F. Mitchell, Clerk, Titusville, will improve and repair present county bridge across Crane Creek; cost not to exceed \$7000; plans and specifications at clerk's office; bids until March 2. (See Machinery Wanted.)

Fla., Tampa.—Tampa, Atlantic & Gulf Ry., Edw. Walker, Gen. Mgr., Box 1061, plans to construct 6 drawbridges and 5 mi. trestle. (See Machinery Wanted.)

Ky., Elizabethtown.—Hardin County Commissioners contemplate constructing bridge across Rolling Fork River at Woolridge's Ferry, between Hardin and Bullitt counties; will not be built soon; no contract.

Miss., Biloxi.—Harrison County Commrs., Gulfport, Miss., will construct bridge across Tchoutacabouffa River at Lamey's Ferry; creosoted lumber with steel draw; cost \$6300; Mr. Marsh, Contr.

N. C., Fayetteville.—Cumberland County Commrs., Felton R. Hall, Clerk, will construct concrete bridge across Big and Little Rockfish creeks at McNeill's Bridge; bids until Feb. 23. (See Machinery Wanted.)

N. C., Winston-Salem.—Winston-Salem Southbound Ry. will construct steel bridge over Linden St. to cost \$30,000.

Okla., El Reno.—Canadian County Commissioners let contract Kansas City Bridge

Co., Kansas City, Mo., at \$21,205 to construct 24 steel bridges.

Tex., Burnet.—Burnet county is reported to have voted bonds to construct 3 bridges. Address County Commrs.

Tex., Onalaska.—Beaumont & Great Northern R. R., W. P. Danforth, Supt., Trinity, Tex., is reported to rebuild burned Brushy bridge.

Tex., Corpus Christi.—Nueces county votes Feb. 14 on \$165,000 bonds to construct causeway across Nueces Bay, connecting mainland on Nueces and San Patricio counties. Address County Commrs. (Lately noted.)

Tex., Fort Worth.—Tarrant County Commissioners will construct south approach to Main St. or Paddock viaduct; bids until Feb. 17; J. A. Mulholland, County Aud.

Tex., Fort Worth.—Tarrant county will construct 100-ft. steel and concrete bridge across Sycamore Creek on Dallas cardinal road; 24-ft. driveway; 5-ft. sidewalk on each side; estimated cost, \$7500; L. S. Leverette, Contr.

Tex., Galveston.—Galveston County Commissioners will construct reinforced concrete bridges and culverts on mainland in connection with mudshell spread on county roads; bids until Feb. 25; John M. Murch, County Auditor; lately noted. (See Machinery Wanted.)

Tex., Glen Flora.—Wharton County Commrs., Wharton, Tex., let contract F. H. Alsberry & Co., Houston, Tex., at \$11,900 to construct bridge at Glen Flora, and at \$2280 bridges at Spanish Camp; J. R. Bowen, County Judge. (Call for bids lately noted.)

Tex., Terrell.—Kaufman County Commrs., Kaufman, Tex., let contract Hess & Skinner of Dallas to construct 2 steel bridges across King's Creek.

W. Va., Clarksburg.—City asks bids until March 12 to erect lately-noted 581-ft. concrete and 450-ft. steel bridges; W. S. Carson, Engr.; G. C. Finly, City Clerk. (See Machinery Wanted.)

CANNING AND PACKING PLANTS

Ark., Fayetteville.—Fayetteville Canning Co., capital \$6500, inctpd.; W. S. Carson, Prest.; R. L. Jernigan, Secy.-Treas.

Fla., Fort Myers.—Lee County Packing Co., H. E. Heitman, Prest. (lately noted to rebuild plant), is now erecting temporary

plant to complete this season's work; expects to be in operation within 2 weeks; probably rebuild permanent plant during summer; fire loss about \$100,000; pack grapefruit and oranges.

Ga., Thomasville.—Killian Lumber Co., Valdosta, Ga., will build packing plant for use of farmers in assembling and packing truck, including watermelons, cucumbers, tomatoes and cabbage. (Lately reported.)

La., Houma.—Bourg Canning Co., capital \$5000, organized; J. P. Hotard, Prest.; C. J. Champagne and C. I. Duthu, V.-Ps.; C. A. Brewer, Secy.-Treas.

N. C., Salisbury.—Rowan Canning Co., R. B. Moore, Mgr., will establish canning plant; has machinery; character of building not determined.

N. C., Salisbury.—Rowan County Canning Co., organized; M. G. M. Fisher, Prest.; R. B. Moore, Secy.-Treas.

Tex., Teague.—J. J. Garmon is reported to build cannery.

W. Va., Huntington.—Berry-McCray Co. (C. A. McCray), Waynesboro, Va., is reported to establish plant to mfr. preserves, vinegar and catsup; brick building on 2-acre site.

CLAYWORKING PLANTS

N. C., Goldsboro.—H. Weil & Bros. will rebuild brick plant lately burned.

Ark., Mansfield.—Tile—Choctaw Brick & Gas Co., T. T. Edwards, Supt., will install lately-noted equipment to mfr. drain tile. (See Machinery Wanted.)

COAL MINES AND COKE OVENS

Ala., Gadsden.—Little River Land Co., E. R. Le Fevre, Prest., is organized as holding company, with possibility of development later; has 2000 acres of mineral land. (Lately noted inctpd., \$25,000 capital.)

Ky., Paintsville.—Slomp Consolidated Coal Co., capital \$2,500,000, organized as merger of Kentucky Consolidated Coal Co., Haly Coal Co., Letcher Coal Co., Henry Coal Co. and Slomp Coal Co.; properties include 100,000 acres of Letcher, Perry, Leslie and Knott county coal land; C. B. Slomp, Prest., Big Stone Gap, Va.; John C. C. Mayo, V.-P.; Geo. F. Copeland, Secy.; John E. Buckingham, Treas., each of Paintsville.

Tex., Dallas.—Central Coal & Lumber Co., capital stock \$100,000, inctpd. by Curtis Seavey, R. F. Hamilton and C. D. Crane.

W. Va., Accoville.—Ruffner Coal Co., capital stock \$25,000, inctpd. by W. W. Whyte of Welch, Shirley Ruffner, Jaeger, W. Va., and C. L. Donevant, Berwind, W. Va.

W. Va., Vivian.—King-Pocahontas Coal Co., capital stock \$7,000,000, inctpd. by Lewis H. Freedman, Albert T. Maurice, Dan D. Murray and others, all of 54 Wall St., New York.

W. Va., Parkersburg.—Premium Fuel Co., capital \$64,000, inctpd. by T. E. Graham, Paulus Resso, Chas. H. Betts and others.

COTTON COMPRESSES AND GINS

N. C., Carthage.—Carthage Ginning & Milling Co., capital \$10,000, inctpd. by W. M. Kivett, J. L. Currie and others.

Okla., Hugo.—W. M. Johnson Gln Co. purchased equipment (costing \$6444.50) for 5 70-saw plant lately noted; erecting 32000 buildings; capacity, 2200 lbs. lint cotton per hr.

COTTONSEED-OIL MILLS

Okla., Tishomingo.—Geo. I. Baldwin, Dallas, Tex., and C. T. Wright, Celina, Tex., are not stockholders, and were lately incorrectly reported as among incorporators of cold-press cottonseed-oil mill with \$25,000 capital.

Tex., Beaumont.—Jefferson county votes Feb. 10 on \$285,000 bonds for drainage; \$200,000 is to be expended for drainage of Hillebrandt Bayou Dist., or Dist. No. 5, and \$85,000 for McFaddin Dist., or Dist. No. 4. Address County Commrs.

Tex., Rogers.—Farmers' Cotton Oil Co. organized; J. R. Bigham, Prest.; C. A. Crouch, V.-P.; J. C. Hendrick, Secy.-Treas.; Thos. C. Webb, Mgr.; plant completed. (Lately noted inctpd., \$40,000 capital.)

DRAINAGE SYSTEMS

La., Walker.—City will construct drainage canal; bonds available. Address The Mayor.

Mo., Palmyra.—Marion County Circuit Court granted petition of Supvrs. Fabius River Drainage Dist. to enlarge district so as to include 5300 acres in Lewis county; enlarged district to comprise 16,900 acres; Jacob A. Harman of Harman Engineering Co., Peoria, Ill., will prepare plans for drainage to call for continuous levee along Mississippi River from mouth of Fabius River, north about 7 mi., and across valley to point where Durgan Creek flows from bluffs; North Fabius River to be diverted from present channel around bluff and empty into South Fabius River.

N. C., Salisbury.—C. M. Miller, Surveyor, Salisbury, and associates will make survey of Grant's Creek; proposed to drain creek from point near Spencer 15 mi. to Dean's Mill, near China Grove.

ELECTRIC PLANTS

Ala., Decatur.—T. H. Chamberlain, Gen. Mgr. Alabama Power Co., Birmingham, states: Not in position to give report on plans to build electric plant at Decatur; construction not fully decided by executive, and at present time in preliminary stage. (Lately reported.)

Ark., Arkadelphia.—Arkansas Power Co., H. C. Couch, Prest., 308 State National Bank Bldg., Little Rock, is reported to expend \$15,000 in improvements to electric-light plant and water-works. (Lately noted as having acquired plants.)

Fla., Bunnell.—Lambert & Moody, owners of electric plant and water-works, contemplate incorporation and enlargement of systems.

Ky., Cave City.—S. B. Davis states company is being organized to install electric-light and ice plant.

Mo., Pattonsburg.—Commercial Club, E. M. Street, Secy. (lately noted promoting construction of municipal electric-light system and water-works), is considering private ownership electric plant; if this is not secured, may endeavor to establish municipal plant.

N. C., Beaufort.—Board of Public Works is reported as contemplating installation of 150 H. P. tubular boiler in electric-light plant; also boiler-feed pump, 100 35-ft. poles, crossarms, etc. H. H. Lewis, Supt.

N. C., Rowland.—Town will construct electric-light plant, sewer system and water-works; issued \$30,000 bonds. J. McR. Bracy, Mayor.

N. C., Hazelwood.—Town will construct electric-light plant and water-works; issued \$15,000 bonds. W. H. Cole, Chrmn. Finance Committee.

S. C., Bishopville.—City contemplates installing 35 H. P. crude-oil engine to operate 20 K. V. A. generator, 3-phase, 60-cycle, 2300 volts; asks bids on installation complete; S. P. Sutton, Engr. municipal water, light and power plant. (See Machinery Wanted.)

S. C., Greer.—City is reported to invite bids to construct electric-light plant, water-works and sewer system; \$67,000 bonds available. Address The Mayor.

Tex., Aransas Pass.—City engaged M. Griffin O'Neil & Sons of Dallas, Tex., to prepare plans and specifications and supervise construction of electric-light plant and water-works; develop 125 H. P.; oil engines; issued \$8000 bonds; open construction bids about April 1; Jesse J. Todd, Mayor. (Lately noted.)

Tex., Bryan.—Commercial Club is interested in plan to construct municipal electric-light plant to cost \$30,000.

Tex., Dallas.—Dallas County Commrs. ask bids until Feb. 11 to install power plant in Criminal Courts and Jail Bldg.; estimated cost, \$25,000; plans by H. A. Overbeck, 501 Junata Bldg., Dallas. (See Machinery Wanted.)

Tex., Hico.—City Council granted franchise to Hico Electric & Power Co. to construct electric-light system.

Tex., Mission.—Chamber of Commerce interested in proposition to build electric plant, water-works and ice factory.

Va., Elkton.—Valley Power Co., capital \$100,000, inctpd.; Charles McCoy, Prest.; A. D. Hoyt, Secy., both of New York.

Va., Sta. Charles.—Electric Transmission Co. (controlled by Samuel Insull, Chicago, and associates) is reported as to triple capacity of electric plant and transmission system, increasing horse-power to 35,000;

transmission throughout Virginia and Kentucky coal fields; include furnishing electricity to Eastern Kentucky plants of Consolidation Coal Co., Fairmont, W. Va., and Baltimore, Md.

FERTILIZER FACTORIES

Ga., Braselton.—Co-operative Fertilizer Co. will establish lately-noted plant; purchased machinery; daily capacity 100 tons; company comprises J. B. Thompson, H. J. Lott and L. F. Sell of Hoscht, Ga.; I. F. Duncan, Flowery Branch, Ga., and Braselton Bros., Braselton.

N. C., Newbern.—Newbern Lime Co., capital stock \$25,000, inceptd. by J. D. Armstrong of Newbern, N. B. Dawson of Conetoe, N. C.; S. A. Dunn and C. C. Josey of Scotland Neck, N. C.

Tenn., Murfreesboro.—Farmers' Fertilizer Works (H. F. Coombs and L. D. Harrell) will install plant; erect \$1000 building; ordinary construction; machinery includes ½-ton batch mixer, elevators, screens, weighing machines, etc. (Lately noted.)

Va., Irvington.—Irvington Fish & Guano Co., organized; Jos. F. Bellows, Pres.; R. Conroy Vance, V.-P.; F. G. Newbill, Secy.; W. J. Ford, Treas.; W. R. Messick, Supt.; succeeds Carter Creek Fish & Guano Co.; plant and equipment complete. (Lately noted inceptd., capital \$80,000.)

FLOUR, FEED AND MEAL MILLS

Ala., Brierfield.—C. G. Smith contemplates installing grist mill; operated by 15 H. P. farm gas engine. (See Machinery Wanted.)

Ky., Lagrange.—Everett & Edwards of Scottsburg, Ind., will build flour mill and grain elevator; estimated cost \$10,000.

Mo., Marthasville.—Marthasville Milling Co., capital \$12,000, inceptd. by F. C. Scovel, O. F. Berg and William Armann.

Va., Bridle Creek.—C. E. Bryant let contract to install machinery for 100-bbl. flour mill; will erect brick mill house; W. F. Perkins, Belton, N. C., will be Mgr. of new plant.

Va., Richmond.—Mayo Milling Co., 817 N. 17th St., organized; G. D. Mayo, Pres.; W. R. Long, V.-P.; M. A. Wilkinson, Secy.; will operate plant to mfr. table meal; daily capacity 1000 bu.; machinery installed. (Lately noted inceptd., \$50,000 capital.)

W. Va., Charleston.—Charleston Mfg. & Produce Co. let contract to install machinery for 600-bbl. flour mill and 600-bbl. corn-meal plant. (Previously noted to rebuild burned mill.)

FOUNDRY AND MACHINE PLANTS

Fla., Jacksonville.—Ice Machines.—Domestic Ice Machine Co., M. T. Brown, 423 W. Adams St., Pres. (lately noted inceptd., capital stock \$250,000), has not settled on location of plant; will not erect factory at present; expects to contract manufacture of 500 to 1000 machines of one-quarter to one ton capacity; having plans and specifications prepared for machines; will be in market to let contracts; now asking bids on motors, engines, etc. (See Machinery Wanted.)

Fla., Tampa.—Machine Shops.—Tampa Gas Co. purchased site fronting on river between Cass and Cuba Sts. on which to erect supply shops and warehouse.

Fla., Tampa.—Pipe Coupling.—DeWitt C. Bailey of Mulberry, Fla., is reported as contemplating mfr. of patented boltless pipe coupling.

Ga., Trenton.—Pumps.—Kiser Pump & Foundry Co. is reported as organized by D. J. Kiser of Attilla, Ala., and others to mfr. frictionless pump.

Miss., Vicksburg.—Grates.—Guy F. Donohue contemplates manufacture of patented shaker grates. (See Machinery Wanted.)

Tex., Trinity.—Machine Shop.—G. P. Grossjean reported to erect machine shop.

W. Va., Parkersburg.—Boilers and Tanks.—Donovan's Boiler Works, Hugh Donovan, Jr., Mgr., 6th St. and Kanawha River, opened building and machinery bids Feb. 1 for lately-noted additional building and equipment; erect \$4000 steel building, 100x40x24 ft.; install punch, sheaves, traveling crane, engines, etc., costing about \$4000; product, oil country steam boilers and tanks.

GAS AND OIL ENTERPRISES

Ala., Birmingham.—Oil Tanks.—The Texas Co. (main office, Houston, Tex.) is reported to build additional tanks costing about \$10,000; now establishing Birmingham offices in American Trust Bldg.

Ga., Atlanta.—Refinery.—Atlanta Refining Co. will erect 2-story brick building; cost \$5000; day labor.

Ky., Louisville.—Edmonson County Oil & Gas Co., capital stock \$20,000, inceptd. by Wm. Phillips, D. B. Beeler and Leon P. Lewis.

La., Alexandria.—Gas.—Mayor and City Commrs. authorized I. W. Sylvester, City Engr., to prepare plans and specifications and estimate cost of constructing gas system for heating and illuminating.

La., New Orleans.—Oil Refinery, etc.—International Storage & Warehouse Co., J. A. Landry, Gen. Mgr., advises has not yet completed plans. (Lately reported to construct oil-storage plant to cost exceeding \$100,000 and oil refinery to cost about \$1,000,000.)

La., Campti.—Campti Oil & Gas Co. incorporated; develop gas and oil land near Campti; Isaac Rapihl, Pres.; T. K. Giddens, V.-P.; E. C. Readheimer, Secy.; W. H. Huckaby, Treas.

La., Natchitoches.—Natchitoches Gas Co., capital \$50,000, inceptd.; leased gas and oil property; H. A. Cook, Pres.; Jas. B. Tucker, V.-P.; M. E. Prudhomme, Secy.-Treas.

N. C., Hickory.—Gas.—Pennsylvania Gas Co., Warren, Pa., is reported as contemplating establishment of gas plant.

Okla., Ada.—Miller Oil Co., capital stock \$10,000, inceptd. by B. H. Epperson, Charles H. Miller and D. M. Pendleton.

Okla., Ada.—Mac Thwaite Oil & Gas Co., capital \$50,000, inceptd. by J. S. Satterthwaite, E. E. McCormick and C. L. Weeks.

Okla., Ardmore.—Houston-Oklahoma Oil Co., capital stock \$75,000, inceptd. by H. T. Statti, Houston, Tex.; Guy Green, Waurika; W. B. Johnston of Ardmore.

Okla., Ardmore.—Ardmore Refining Co., capital stock \$32,000, inceptd. by J. B. White of Ardmore, J. S. Alexander and W. C. Brissett of Oklahoma City.

Okla., Beaver.—Holmeswright Oil & Gas Co., capital stock \$5000, inceptd. by R. E. Dickson, A. S. Dickson and L. S. Munsell.

Okla., Tulsa.—Clarke Oil Co., capital \$50,000, inceptd. by John W. Cunningham, Geo. D. Key, Bertha Key and others.

Okla., Tulsa.—Krugger Oil Co., capital stock \$10,000, inceptd. by Fred D. Miller, Lester Currie and A. H. Kruger.

Okla., Tulsa.—Glenn Gas Co., capital stock \$20,000, inceptd. by W. H. Burns, F. W. Dye and J. E. Duffy.

Okla., Tulsa.—Straughan-Perryman Oil Co., capital \$10,000, inceptd. by T. F. Birmingham and J. P. Straughan of Tulsa and W. H. Gray of Houston, Tex.

Okla., Woodward.—Elitors Oil & Development Co., capital \$50,000, inceptd. by C. T. Hanley, Xen Van Buskirk and A. M. Henley.

Tex., Harrold.—Harrold Petroleum Oil Co., capital stock \$10,000, inceptd. by C. T. Herling, J. M. King and J. C. King.

Tex., Marshall.—Latex Drilling Co., capital \$15,000, inceptd.; G. B. Crow, Pres.; H. J. Falls, Secy.-Treas.; J. A. Stockley, V.-P. and Gen. Mgr.

Tex., Marshall.—Marshall Gas & Oil Co., capital \$100,000, inceptd.; G. B. Crow, Pres.; H. J. Falls, Secy.-Treas.; J. A. Stockley, V.-P. and Gen. Mgr.

Tex., Mineral Wells.—Crazy Oil & Gas Co., capital stock \$50,000, inceptd. by C. F. Scofield, Frank Dameron and M. W. Howard.

W. Va., Morgantown.—Martin Oil & Gas Co., capital stock \$25,000, inceptd. by Lemley Martin, Chauncey W. Huston, Chas. E. Miller and others.

W. Va., Parkersburg.—Leading Oil Co., capital \$64,000, inceptd. by L. D. Dunsmoor, C. L. Brown, Chas. H. Betts and others.

W. Va., St. Marys.—Producing High Grade Oil Co., capital stock \$20,000, inceptd. by C. P. Craig, Ross Wells, Everett T. Burk and others.

W. Va., Wheeling.—Fuel Gas.—Liquid Fuel Gas Co., capital stock \$100,000, inceptd. by A.

contract let. (Lately noted to install 15-ton ice plant.)

Tex., Harlingen.—Southwest Ice & Mfg. Co., capital stock \$10,000, inceptd. by H. Hamilton, John Sweeney and F. Kalisch.

Tex., Mission.—Chamber of Commerce interested in proposition to build ice factory, electric plant and water-works.

Tex., Texarkana.—Martin Ice Co. organized; R. P. Martin, Pres. and Mgr.; J. D. Cook, V.-P.; J. H. Slye, Secy.-Treas. (Lately noted inceptd., capital \$17,500.)

Va., Herndon.—Herndon Ice & Supply Co., capital \$15,000, inceptd.; F. M. Walker, Pres.; P. M. Galvin, Secy.

Va., Staunton.—Virginia Cold Storage Corp., C. R. Caldwell, interested, will establish cold-storage plant of 30,000 barrels capacity; building contract not let; building and machinery to cost about \$50,000. (Lately noted as "Augusta County Fruit Growers' Assn.")

W. Va., Montgomery.—People's Ice Co., capital stock \$50,000, inceptd. by Ben Share, B. H. Early, Aaron Meyers and others.

IRRIGATION SYSTEMS

Tex., Hawley.—Brazos Irrigation Co., C. J. Thomas, Pres., Box 682, Dallas, Tex., has had surveys and estimates completed for 10,000-acre gravity irrigation project for Clear Fork; Cooke & Harrison, Engrs., Southwestern Life Bldg., Dallas; correspondence with contractors desired. (See Machinery Wanted.)

LAND DEVELOPMENTS

Ala., Birmingham.—Fairfield Development Co., capital stock \$2000, inceptd. G. W. Yancey, Pres.; H. M. Thweatt, V.-P.; M. E. McElroy, Secy.-Treas.

Ala., Eufaula.—B. F. Reynolds purchased 3136 acres farming land in Babour county; reported purchase price \$46,950.

Ala., Eufaula.—W. B. Mitchell and others purchased 4190 acres farming land in Babour county.

Ala., Warrior.—Rockland Development Co., G. A. Collins, Pres. (lately noted inceptd., \$2000 capital stock), will develop 80 acres; townsite.

Ark., Jefferson County.—Carnahan-Hudson Co., Lexington, Ky., inceptd.; capital \$50,000; officers are R. Carnahan, L. G. Cox, Geo. K. Groves and C. N. Manning; purchased 5000 acres land and timber to hold or sell.

Fla., St. Petersburg.—La Plaza Development Co., Chas. R. Hall, Pres., has subdivided property on Long Key, between Boca Ciega Bay and Gulf of Mexico; C. E. Burleson, Engr. (Lately noted inceptd., \$150,000 capital.)

Fla., St. Petersburg.—Pass-a-Grille Realty Co., organized; J. W. Johnstone, Pres.; Duncan Johnstone, V.-P.; H. M. Pancoast, Secy.-Treas.; has subdivided property on Long Key, between Boca Ciega Bay and Gulf of Mexico; C. E. Burleson, Engr. (Lately noted inceptd., capital \$60,000.)

La., Pickering.—Rice Land Co., 702 Commerce Bldg., Kansas City, Mo., inceptd.; capital \$3000; C. E. Rice, Pres.; H. G. Metzler, V.-P.; Jas. P. Worthington, Secy.-Treas.; develop 50,000 acres cut-over land. (See Mo., Kansas City.)

Mo., Kansas City.—Rice Land Co., 702 Commerce Bldg. (lately noted), develops land at Pickering, La. (See Pickering.)

Mo., Mexico.—Riverland Farms Co. (lately noted inceptd., \$100,000 capital stock) organized; J. Robt. Boatman, Pres.; Wm. Nelson Boatman, V.-P.; E. S. Wilson, Secy.-Treas.; develop 5000 acres in Pike county; improvements, including clearing and road construction, cost \$140,000; engineer not selected.

N. C., Elizabeth City.—Home Development Co., capital \$25,000, inceptd. by F. W. M. Butler, W. A. Britton, E. L. Hobler and others.

N. C., Wilmington.—Kure Land & Development Co., organized; Hans A. Kure, Pres.; J. A. Hinton, V.-P.; L. C. Kure, Treas.; Hans A. Kure, Jr., Secy.; develop 800 acres in Federal Point township as "Fort Fisher Sea Beach"; macadamized streets; cement sidewalks; water; cottages; work by company. (Previously noted inceptd. and to develop residential section.)

S. C., Columbia.—Unit Improvement Co., 1215 Washington St., will develop 5 acres for building purposes; cost of improvements \$25,000. (Lately noted inceptd., \$10,000 capital.)

Tex., Beaumont.—East Beaumont Townsite Co. will develop 1400 acres as townsite. (See Miscellaneous Construction.)

Tex., Dallas.—Central Land Co. purchased 35 acres on 2d Ave. and will develop as residential section.

PROPOSAL ADVERTISEMENTS

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ICE AND COLD-STORAGE PLANTS

Ala., Birmingham.—Birmingham Realty Co. is reported to build cold-storage plant for joint use of merchants in vicinity.

Ala., Mobile.—Swift & Co. (main office, Chicago, Ill.) are reported to install refrigerator and make general repairs to building at Commerce and Conti Sts.; cost \$4000.

Ala., Ensley.—Birmingham Ice Factory reported to erect 1-story brick building to cost \$5100.

Ga., Elberton.—E. C. Enright and E. S. Golden are reported to have purchased Elberton plant; ordered machinery and will increase capacity.

Ky., Cave City.—S. B. Davis states company is being organized to install ice and electric-light plant.

Ky., Sebree.—M. M. Hancock, proprietor Green River Mill, is reported as contemplating installation of ice plant.

La., New Orleans.—Jacobs Candy Co. will install additional cold-storage room; present capacity 25 tons; also refit offices in cold-storage dept.; contracts let. (See Miscellaneous Factories.)

La., Shreveport.—Shreveport Ice & Brewing Co. will build refrigerating plant and make other improvements to ice plant; reported cost \$200,000; Gilsont Construction Co., Contr., St. Louis, Mo.

Mo., Kansas City.—Missouri Valley Cold Storage Co., capital \$250,000, inceptd. by F. G. Crowell, W. E. Hazen and Edward S. North.

N. C., Raleigh.—Powell & Powell will enlarge ice factory to 50 tons capacity; increase over present capacity of 35 tons; cost about \$30,000.

Tex., Graham.—Graham Mill & Elevator Co., S. R. Crawford, Pres., let contract for \$7000 brick building to Mothes & Groves; H. J. Bryant, Construction Engr.; machinery

Tex., Marshall.—Latex Realty Co., capital \$3000, inceptd.; H. J. Falls, Prest.; Mrs. M. D. Falls, Secy.-Treas.; J. A. Stockley, V.-P. and Gen. Mgr.

Tex., Webster.—Salbara Nursery & Orchard Co., capital stock \$50,000, inceptd. by Salto Salbara, K. Salbara and T. Nakamura.

Va., Norfolk.—West Ghent Boulevard Co., capital \$100,000, inceptd.; W. H. Taylor, Prest.; E. B. Johnson, Secy.

Va., Norfolk.—Arthur M. Guy Co. purchased 22 acres land between Norfolk & Western Ry. and Park Pl. and will develop as residential section; invites bids for 4000 ft. grading; construct 100-ft. parking boulevard; erect 100 bungalows, each having 5 to 8 rooms and costing \$3000 to \$6000.

Va., Staunton.—Beverly Manor Orchards Co., capital \$50,000, inceptd.; A. H. Apperson, Prest.; Richmond; A. L. Tynes, Secy.-Treas., Staunton.

LUMBER MANUFACTURING

Ala., Brierfield.—C. G. Smith contemplates installing sawmill; operate by 15 H. P. farm gas engine. (See Machinery Wanted.)

Ark., White County.—C. L. Goodwin of Greensburg, Pa., is reported to have purchased 15,000 acres timber land in White county; reported purchase price, \$150,000.

La., Ragley, P. O. at Fullerton.—W. G. Ragley Lumber Co., Ragley, Tex., completing arrangements to erect circular and gang type sawmill about 2 mi. from Fulton, La.; plant will consist of single circular and 48-in. gang sawmill with automatic sorting system, consisting of 350 ft. sorter with additional drop sorter for handling kiln-dried lumber from 4 brick kilns, power-driven transfers and resorters for grading lumber after received from mill and power distributing system from kilns into storage sheds for rough lumber; plans to contain 6 fast feed machines, electrically operated; central power station to consist of 5-84-in. high-pressure boilers set in steamboat casings; mill to be operated by twin engines and rope transmission; carriage to be 5-block carriage, 14-in. shotgun feed with complement of niggers, kickers and loaders; edger 308 in. wide and trimmer handling stock up to 38 ft. long and 6 in. thick; let contracts for machinery. (Previously noted.)

Ky., Murray.—Brown-Belcher Lumber Co., capital \$10,000, inceptd. by W. T. Slodd, T. H. Miller, V. H. Clark and others.

Miss., Wesson.—Eastern Hardwood Mfg. Co. is reported to erect single-band sawmill.

Mo., Henrietta.—Henrietta Lumber Co., capital \$10,000, inceptd. by C. A. Mattie and E. and A. W. Watkins.

N. C., Waynesville.—Evans-Smith-Viall Lumber Co., capital stock \$30,000, inceptd. by Elbert Smith and O. H. Viall of Waynesville and J. Wistar Evans of Philadelphia, Pa.

Okl., Moyers.—Moyers Logging Co., capital \$75,000, inceptd. by Henry Walker, H. C. Hopkins and C. M. Hopkins.

Tex., Wellington.—John Waller and Adolph Woods are reported to install planing mill.

W. Va., Beckley.—Dan Cline, C. O. Jerrell and Eugene Colcord are reported as contemplating installation of sawmills to develop timber.

METAL-WORKING PLANTS

Ky., Covington.—Art Bronze.—Michaels Art Bronze Co., capital \$30,000, inceptd. by F. L. Michaels, Maurice L. Galvin and Philip G. Queal.

Okl., Oklahoma City.—Jarboe Metal Co., capital stock \$1000, inceptd. by Mrs. Flore Jarboe, Miss Ada Jarboe and Thomas S. Gill.

MINING

Ala., Attalla.—Limestone.—Attalla Lime & Land Co., capital stock \$5000, inceptd.; install plant to develop 40 acres; limestone quarries; W. F. Stowers, Prest.; Wilburn Hill, Secy.

Ark., Conway.—Phosphate.—R. M. Brown, Lebanon, Mo., is reported as to develop phosphate property near Conway.

Mo., Joplin.—Lead and Zinc.—School House Mining Co., capital stock \$60,000, inceptd. by J. F. Dexter, W. J. Owen and G. F. C. Cori.

Tenn., Fayetteville.—H. K. Bryson is reported as, contemplating development of sand deposits; sand to be used in mfr. of sand-lime brick.

Va., Limeton.—Lime.—Limeton Lime Co., capital \$20,000, inceptd.; R. E. Herr, Prest.; Theo. Musaeus, Secy.

W. Va., Huntington.—Gravel.—Pinson Land & Gravel Co., capital stock \$10,000, inceptd. by Geo. D. Miller, Wm. T. Pinson, Henry P. Pinson and others.

MISCELLANEOUS CONSTRUCTION

Ark., England.—Levee.—Plum Bayou Levee Dist., W. D. Dickinson, Ch. Engr., Little Rock, will construct 30,000 yds. of levee to be known as Chambers Loop, near Plum Bayou; bids opened.

Fla., Eustis.—Bulkhead.—Town will vote on bonds to construct bulkhead along portion of lake front. Address Town Clerk.

Fla., Pablo Beach.—Seawall.—Engineering & Contracting Co., 336 St. James Bldg., Jacksonville, Fla., has contract at \$6 per lin. ft. to construct about 100 lin. ft. (with privilege of extension) seawall; Gall L. Barnard of company Engr. in charge. (Lately noted.)

Ga., Savannah.—Cofferdam.—Chatham County Commrs. let contract David Power of Savannah at \$5,200.20 to construct cofferdam around Augustine and outlet lock; G. Reuben Butler, County Clerk. (Call for bids lately noted.)

Ga., Savannah.—Steamship Terminals.—Ocean Steamship Co. of Savannah, W. H. Pleasants, V.-P. and Gen. Mgr., Pier 35 North River, New York, will construct terminals with concrete substructure and steel superstructure; further details not ready for announcement. (Lately reported to build fireproof terminals costing \$500,000.)

La., New Orleans.—Wharf.—Board of Port Commrs., Robt. G. Guerard, Prest., will complete Pauline St. wharf; bids until Feb. 25; plans and specifications in office of Samuel Young, 200 New Orleans Court Bldg., New Orleans. (See Machinery Wanted.)

Md., Annapolis.—Wharf.—Navy Dept., Bureau of Yards and Docks, H. R. Stanford, Ch. of Bureau, Washington, D. C., let contract Raymond Concrete Pile Co., 140 Cedar St., New York, at \$99,650 to construct reinforced wharf at U. S. Naval Academy. (Full particulars lately noted.)

Md., Baltimore.—Pier.—Pennsylvania R. R., Alex. C. Shand, Ch. Engr., is reported as planning to rebuild immigrant pier, U. S. bonded warehouse and Pier No. 3 at foot of Clinton St., Canton, burned at estimated loss of \$50,000.

Mo., Hannibal.—Monument.—Hatch Monument Assn., F. L. Schofield, Chmn., let contract Fred C. Hibbard of Chicago, Ill., to erect monument in Central Park; Vermont buff marble on concrete foundation; above this another square slab of granite and surrounding bronze figure; height, 45 ft.; cost \$5000.

Mo., Kansas City.—Signal System.—Kansas City, Clay County & St. Joseph Ry., J. R. Harrigan, Gen. Mgr., has authority of Missouri Public Service Commission to issue \$135,000 bonds to be expended, it is reported, to install automatic signal system from Kansas City to St. Joseph.

Tenn., Memphis.—Subway.—Chicago, Rock Island Pacific Ry.'s concrete subway and retaining wall (contract lately noted let to Fox Construction Co., El Reno, Okla., and Memphis) will cost about \$75,000; subcontracts let include: To Fischer Lime & Cement Co., for cement; Union Sand & Material Co. and Dale Sand Co., for sand; Foster, Creighton & Gould, for crushed rock; Pidgeon-Thomas Iron Co., for reinforcing iron; all of Memphis.

Tex., Beaumont.—Levee.—East Beaumont Townsite Co. let contract A. C. Wilkins to construct dirt levee to encircle 1400 acres land on east of Neches River opposite Beaumont; levee will be 7 mi. long, 10 ft. high from ground, 13 ft. from minimum low-river tide, 50 ft. wide at base and 10 ft. at crown; estimated cost, \$60,000 to \$65,000; also construct canal 35 ft. wide and 10 ft. deep along east side of levee from Beard's Lake to Snaggy Bayou; dirt removed in construction of canal used in building levee; Kidd's Bayou to be used as catch basin; timber is now being removed from property, after which entire tract will be developed as townsite, particularly for manufacturing sites, loading docks, etc.

Va., Cape Charles.—Coaling and Sanding Plant.—New York, Philadelphia & Norfolk R. R., R. V. Massey, Supt., Cape Charles, will build Holman type locomotive coaling and sanding plant; let contract at \$17,000 to Roberts & Schaefer Co. of Chicago.

Va., Dante.—Coaling and Sanding Plant.—Carolina, Clinchfield & Ohio Ry., Ward Crosby, Ch. Engr., Johnson City, Tenn., will erect coaling and sanding plant; fireproof; reinforced concrete; Holman type bucket; cost about \$15,000; let contract Roberts & Schaefer Co. of Chicago.

W. Va., Huntington.—Mausoleum.—West Virginia American Mausoleum Assn. will build mausoleum in Spring Hill Cemetery; exterior of granite, with bronze decorations; interior finished in polished marble; site, 100x300 ft.; estimated cost, \$95,000.

MISCELLANEOUS ENTERPRISES

Ala., Birmingham.—Laundry.—Acme Laundry Co. is reported as having plans prepared by J. M. Marriott for laundry; probably steel and reinforced plate glass; site 150x140 ft.; estimated cost, \$75,000.

Ala., Birmingham.—Publishing.—Aggressive Farmer & Stockman, capital stock \$5000, inceptd.; T. C. Long, Prest., Birmingham; L. F. Long, V.-P., Guntersville, Ala.; R. L. Lacy, Secy.-Treas., Birmingham.

Ala., Carrollton.—Publishing.—Pickens County Herald Publishing Co., A. E. Bell, Prest. (lately noted organized, capital \$10,000), will open bids March 10 to erect \$3000 2-story mill-construction building; machinery (purchased) cost \$5000; J. W. Cox, V.-P.; Ben I. Rapport, Secy., Treas. and Mgr.

Ark., Little Rock.—Abattoir.—City receives bids until Feb. 20 to erect proposed abattoir. Address The Mayor.

D. C., Washington.—Contracting.—Talcott-Poor Co., capital stock \$5000, inceptd. by Jas. Edgar Johnson, Robt. Oliver Beckham and Raymond W. Charlton.

Fla., Miami.—Laundry.—Miami Laundry Co. is reported to erect concrete building on 9th St. to be equipped as laundry; 1 story; cost \$15,000; install water softener; cost, with equipment, \$30,000.

Ga., Valdosta.—Dairy.—Riverside Dairy Co., W. A. Tabor, Mgr., is reported to have purchased Riverside Dairy; remodel and enlarge.

Ky., Lagrange.—Grain Elevator.—Everett & Edwards of Scottsburg, Ind., will build grain elevator and flour mill; estimated cost \$10,000.

Mo., Joplin.—Contracting.—Ozark Paving Co., capital stock \$5000, inceptd. by W. E. Koch, Henry Kast and Hiram Phillips.

Mo., Kansas City.—Engineering.—United States Engineering Co., capital \$3000, inceptd. by Wm. John and Henry J. Nottberg.

Mo., Kansas City.—Dry Cleaning.—Valot French Dry Cleaning Co., 3112 Main St., organized; M. O. Bouff, Prest.-Treas.; Howard L. Jamison, V.-P.; I. B. Allmon, Secy.; install cleaning machinery, boiler and electric motor to cost \$2000. (Lately noted inceptd., \$5000 capital.)

Mo., St. Louis.—Garbage Reduction.—City is considering erection of garbage reduction plant; estimated cost \$350,000. Address The Mayor.

Mo., St. Louis.—Printing.—Hogan-Mernagh Printing Co., 17 N. 3d St., capital stock \$7500, inceptd.; E. F. Hogan, Prest.; E. O. Mernagh, V.-P.-Mgr.; Ben P. Goodwin, Secy.-Treas.

Mo., St. Louis.—Electrical Contracting.—E. A. Koeneman Electric Co., 110 S. 19th St., organized; E. A. Koeneman, Prest. and Treas.; Chas. Koeneman, V.-P.; C. H. Chapline, Secy.; contracts for electric wiring. (Lately noted inceptd., \$12,000 capital, under Foundry and Machine Shops.)

Mo., Webster Groves, Station St. Louis.—Contracting.—Efficients Contracting & Supply Co., capital \$5000, inceptd. by E. W. Mills, L. C. Davis and Wm. O. Davis.

N. C., Durham.—Steam Laundry.—Model Steam Laundry (R. L. Lindsey interested) let contract to erect building to replace burned plant; contract for machinery also placed. (Lately noted.)

N. C., Greensboro.—Laundry.—Dick's Laundry Co. will remodel building, erect 60-ft. addition and install additional machinery.

N. C., High Point.—Publishing.—Furniture Gazette Co., capital \$25,000, inceptd. by J. H. Mellichampe, E. W. Mellichampe and T. Bright Carriek.

Okl., Grandfield.—Hardware.—Grandfield Hardware Co., capital stock \$6000, inceptd. by J. A. Carr, A. H. Prichard of Frederick, C. O. Grigsby of Grandfield.

Tenn., Chattanooga.—Dairy.—Clover Leaf Dairy Co., capital stock \$50,000, inceptd. by Frank O. Rettings, W. J. Rushton, W. Riley and others.

Tenn., Nashville.—Publishing.—Nashville Commercial News Publishing Co., capital stock \$5000, inceptd. by R. H. Yancey, Jr., and Adolph Hill, Jr.

Tenn., Franklin.—Laundry.—Loeb Laundry Co. will build laundry.

Tex., Dallas.—Plumbing.—Dallas Plumbing Co., capital stock \$7500, inceptd. by C. I. Dickerson, Mrs. Carrie Butler and O. R. Olson.

Tex., Kyle.—Hardware, etc.—Kyle Furniture & Hardware Co. organized; H. C. Wallace, Prest. and Treas.; Ira B. Hay, V.-P. and Mgr.; hardware and furniture. (Lately noted inceptd., \$9000 capital.)

Tex., San Antonio.—Dairy.—Myrtle Park Dairy Co., capital stock \$10,000, inceptd. by E. J. Hutcheson, Sidney W. Weiss and Sam Alexander.

Tex., Yoakum.—Incinerator.—City votes Mch. 18 on \$2000 bonds to build incinerating plant. Address The Mayor.

Va., Burnside, P. O. at Petersburg.—Stockyards.—Petersburg Stockyards Corp., capital \$50,000, chartered; T. F. Parsons, Prest.; C. N. Romaine, Secy., both of Petersburg.

Va., Lawrenceville.—Live Stock.—Brunswick Live Stock Corp., capital \$25,000, chartered; W. A. Moseley, Prest.; W. B. Valentine, Secy.-Treas.

Va., Norfolk.—Printing.—Eugene L. Graves, 451 Plume St., let contract for lately-noted plant; erect 30x135-ft. 1 and 2-story ordinary-mill-construction building; cost about \$6000.

Va., Bluemont.—Blue Ridge Supply Co., capital \$25,000, inceptd.; W. E. Blount, Prest.; Mabel Blount, Secy.

Va., Roanoke.—Dairy.—F. R. Kennedy of Chattanooga, Tenn., is reported to have purchased 148-acre farm and as contemplating establishment of dairy; erect barn and other structures.

MISCELLANEOUS FACTORIES

Ala., Eufaula.—Harness.—Vance Bros., Montezuma, Ga., are reported to establish harness factory.

Ala., Montgomery.—Showcases.—Georgia Show Case Co., J. E. Britt, Prest., Columbus, Ga., advises will install sprinkler system in Montgomery plant and (perhaps within several months) erect addition to building; needed machinery has been purchased, and is being installed. (Lately noted purchasing plant of former Montgomery Show Case Co.)

Ala., Tuscaloosa.—Packing Guard.—Nuway Packing Guard Co., capital \$50,000, inceptd. to mfr. packing guard for use on railroad cars; reported that for present guards will be mfrd. by Nashville Bridge Co. at Nashville, Tenn., but later proposes to build plant.

D. C., Washington.—Upholstering.—Estate of Henry Polkinhorn, 1533 P. St. N. W., opens bids in Feb. to remodel building lately occupied by Bedell Mfg. Co. as upholstering and mattress factory; 47x67 ft.; cost (without mechanical equipment) \$12,000; tin roof; gas and electric lighting; brick sidewalks; install elevator to cost \$300 to \$500. (Lately noted.)

Fla., Goulds.—Syrup.—W. S. Burkhardt will erect syrup mill on sugar-cane plantation at Seminole Plains near Goulds; let contract Chattanooga (Tenn.) company.

Ga., Atlanta.—Cones.—Dixie Cone Co., capital stock \$10,000, inceptd. by P. L. Provano, W. G. Smith, H. M. Purnell and H. T. Kilpatrick.

Ky., Louisville.—National Mfg. Co., capital \$12,000, inceptd. by Simon Lion, Isadore Hyman and Henry Liebenberg.

Ky., Louisville.—Soap.—Louisville Soap Co. will remodel brick addition at 1304 S. Shelby St.; cost \$10,000.

Ky., Middlesboro.—Gloves.—Cherokee Glove Co. of Lebanon, Tenn., is reported to establish glove factory; organize with \$15,000 capital stock.

Ky., Pikeville.—Pikeville Mfg. Co., capital \$2000, inceptd. by F. C. Trivett, E. H. Brooks, J. H. Keathly and others.

Ky., Union.—Creamery.—Union Creamery Co., capital \$1500, inceptd. by A. L. Mallett, Andrew Rohan, J. L. Frazier and T. W. Burke.

La., New Orleans.—Candy.—Jacobs Candy Co. will improve plant on Carondelet St. to increase capacity; rebuild and enlarge office; add mezzanine floor and display department, with glass and enamel work; also improve cold-storage dept.; install larger machines; contracts let; building plans by Emile Weil, Whitney-Central Bldg., New Orleans. (See Ice and Cold-storage Plants.)

Md., Baltimore.—Bottle Stoppers.—Crown Cork & Seal Co., 1501-1523 Guilford Ave., is having plans prepared by Otto G. Simonson, Maryland Casualty Tower Bldg., for building; 5 stories; reinforced concrete and brick.

Mo., Cassville.—Marble and Lime.—Cassville Marble & Lime Co. acquired 1 1/2 acres land adjoining plant on which, it is reported, to build additional mills and shops and enlarge yard; install additional machinery.

Mo., Kansas City.—Katz-Bachmann Mfg. Co., 1624 Main St., capital \$20,000, inceptd.; L. P. Katz, Prest.; E. H. Bachman, Secy.

Mo., St. Louis.—Cloaks.—Addison Cloak Co., capital stock \$50,000, inceptd. by J. B. Ollan, A. Ollan, J. N. Sapin and others.

Mo., St. Louis.—Shoes.—Dri-Foot Shoe Co., capital stock \$30,000, inceptd. by H. Converse, Jesse T. Baker and H. B. Barton.

N. C., Greensboro.—Chandellers.—Peerless Chandler Co., capital \$25,000, inceptd. by L. D. Sergeant and P. W. Richardson of

Greensboro and R. P. Richardson of Reidsville, N. C.

N. C., High Point.—High Point Mfg. Co., F. E. Crulman, Mgr., increased capital stock from \$25,000 to \$50,000; for buildings and enlargements made during 1913; doubled capacity.

N. C., Kinston—Tobacco Stemmer.—C. R. Dabson & Co. are reported to erect addition to tobacco stemmer.

N. C., Kinston—Tobacco.—John E. Hughes & Co. of Danville, Va., are reported to build tobacco factory costing \$25,000.

N. C., Monroe—Creamery.—Monroe Creamery Co., capital \$20,000, inceptd. by M. K. Lee, T. E. Williams and others.

N. C., Murphy—Chemicals.—Ozal Chemical Co., capital stock \$100,000, inceptd. by W. A. Elliott and Frank S. Conley of Murphy and M. C. King of Copper Hill, Tenn.

N. C., Northwilkeshoro.—Blair-Harrington Mercantile Mfg. Co., capital \$125,000, inceptd. by H. T. Blair, W. E. Harrington and others.

Okla., Muskogee.—Criswell Mfg. Co., capital stock \$5000, inceptd. by Etta A. Criswell and J. M. Criswell of Muskogee and W. J. Criswell of Haskell, Okla.

Okla., Westville.—Creamery.—Westville Creamery Assn., capital \$6000, inceptd. by Geo. H. Hinds, D. W. Bushyhead and H. W. Wilson.

S. C., Georgetown.—Georgetown Pepsi Cola Bottling Co. organized; J. T. Oglesby, Pres.; Secy., Charleston, S. C.; J. F. Oglesby, V. P.; C. J. Oglesby, Treas.; operate plant to bottle Pepsi cola; install equipment to cost \$3000. (Lately noted inceptd., Charleston, as Charleston Pepsi Cola Bottling Co., with \$10,000 capital.)

S. C., Spartanburg.—Bakery.—City Bakery, capital \$1000, inceptd. by T. E. Garden and S. Hecklin.

Tenn., Knoxville—Overalls.—National Union Overall Co., capital \$15,000, inceptd. by W. D. Rodgers, Frank McCleneghan, Albert Lockett and others.

Tenn., Memphis—Electric Supplies.—A. L. Pritchard of Pritchard Bros. Co. will erect 2-story reinforced concrete building for manufacturing, office and warehouse purposes; Hauck & Cairns, Archts., Memphis. (See Warehouses.)

Tenn., Nashville—Rubber Goods.—Hadfield Rubber Co., 911 Switzer Ave., Akron, O., is reported as conferring with Industrial Bureau relative to establishing plant to manufacture rubber goods used by surgeons; company advises has not decided on removal, but may possibly change location.

Tenn., South Pittsburg—Bottling.—South Pittsburg Bottling Co., capital \$10,000, inceptd. by D. Y. Conatser, A. S. Kelly, E. M. Deakins and others.

Tex., Dallas—Electric Supplies.—Carroll Electric Co., capital stock \$5000, inceptd. by E. A. Corley, Wm. M. Jones and Wm. C. Carroll.

Tex., San Angelo—Creamery.—Angelo Creamery Co. (Geo. B. Conley, Gen. Mgr. of Alvin & Houston Creameries in Texas, and associates) established previously-noted creamery; machinery supplied; capacity 1500 lbs. butter daily; leased building; R. S. Evans, local manager.

Tex., San Antonio—Automobile Tires.—Texas Climatic Tire Mfg. Assn., E. W. Knight, Mgr., will install tie-building machinery to cost \$60,000; erect 150x175-ft. building; cost \$20,000; 100 tires per 10-hour capacity. (Lately noted inceptd., \$150,000 capital.)

Tex., Sugar Land—Sugar Mill.—Imperial Mercantile Co., G. D. Ulrich, Mgr., has not definitely determined on plans for rebuilding mill. (Lately noted to rebuild burned mill and warehouse; reported loss \$100,000.)

Tex., Temple—Ice Cream.—Little Rock (Ark.) capitalists are negotiating with Temple Chamber of Commerce relative to establishing ice-cream factory.

Va., Fishersville—Lime Grinding.—Fishersville Lime Grinding Co., Wm. C. Miller, Secy.-Treas. (lately noted to build lime-grinding plant), completed rough building at cost of few hundred dollars; purchased lime crushing and pulverizing machines costing \$3500; daily capacity 50 tons. (See Machinery Wanted.)

Va., Norfolk—Bottling.—Gin-Gera Bottling Co., F. B. Howard, Pres., 1121 Bank of Commerce Bldg., previously noted inceptd., capital \$10,000, has established plant at Norfolk and ordered equipment for plant at Richmond, Va., and at Bluefield, W. Va.

Va., Richmond—Bottling.—Gin-Gera Bottling Co., 1121 Bank of Commerce Bldg., Norfolk, Va., will install plant; equipment ordered.

W. Va., Bluefield—Bottling.—Gin-Gera Bot-

tling Co., 1121 Bank of Commerce Bldg., Norfolk, Va., will install plant; equipment ordered.

MOTORS AND GARAGES

Md., Baltimore—Garage.—H. M. Rowe Co., 21 W. Fayette St., will erect garage and storage building at 624 N. Gilmor St.

N. C., Biltmore—Garage.—Chas. A. Holitt let contract to erect garage, etc. (See Dwellings.)

N. C., Greensboro—Garage.—R. C. Hood let contract W. B. Enoch to erect garage for Carolina Corbitt Co.; 1 and 2 stories; brick; metal roof; cost \$10,000. (R. M. Clapp, Propr. Carolina Corbitt Co., lately noted as letting contract to erect building.)

S. C., Charleston—Automobiles.—Auto Transportation Co. inceptd.; Santo Sottile, Pres.-Treas.; Jas Sottile, Secy.

Tenn., Memphis—Automobiles.—Respiro Motor Co., capital \$25,000, inceptd. by C. M. Hammond, W. G. Cavett, T. A. Acklen and others.

Va., Norfolk—Garage.—Norfolk Sand & Gravel Co. will erect garage; galvanized iron; cost \$3000; Vega & Richardson, Contrs.

Va., Emporia—Automobiles.—Greensville Motor Co., capital \$10,000, inceptd.; W. T. Pond, Pres.; Manie S. Price, Secy.

W. Va., Bluefield—Garage.—D. G. Lilley let contract to D. W. Fulp, Bluefield, to erect garage; 42x50 ft.; cost (without mechanical equipment) \$10,000; mill construction; asbestos or built-up roofing; steam heat; electric lighting; T. T. Carter, Archt., Bluefield; previously noted. (See Machinery Wanted.)

W. Va., Martinsburg—Automobiles, etc.—Universal Mfg. Co., capital stock \$10,000, inceptd. by C. T. Custer, J. Bland Carr, Geo. W. Dixon and others.

W. Va., Moundsville—Garage.—Trimble & Johnson let contract D. T. Burton, Moundsville, to erect garage and display-room. (Lately incorrectly noted under Wheeling.)

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Tex., Galveston—Gulf, Colorado & Santa Fe Ry., F. Merritt, Ch. Engr., is reported to expend \$3597 for shops, engine-houses and turntables; \$3996.58 for bridges, trestles and culverts and \$3063 for water and fuel stations.

W. Va., Huntington.—Chesapeake & Ohio Ry., F. I. Cabell, Ch. Engr., Richmond, Va., is reported to enlarge shops.

ROAD AND STREET WORK

Ala., Clanton.—Chilton county will construct 13 mi. of State-aid road to be link of Birmingham-Montgomery highway; W. S. Keller, State Highway Engr., Montgomery. Ala., will make plans for surveys between Clanton and Mountain Creek; county to appropriate \$8000 and State \$3271. Address County Commrs.

Ala., Laverne.—Crenshaw County Commrs. will grade, drain and surface with sand-clay part of road beginning at Laverne and extending to Montgomery county line; expenditure \$10,542.26; bids until Mch. 16; W. S. Keller, State Highway Engr., Montgomery. Ala. (See Machinery Wanted.)

Ark., Carlisle.—City is reported to expend \$10,000 to construct sidewalks. Address The Mayor.

Ark., Helena.—Phillips county will construct 8 mi. concrete road near Helena; plans being prepared by State Highway Com., H. R. Carter, Engr., Little Rock, Ark.

Ark., Little Rock.—Pulaski county will construct 6½ mi. macadam road (extension of present W. 12th St. pike) near Little Rock; plans being prepared by State Highway Com., H. R. Carter, Engr., Little Rock.

Ark., Lonoke.—Road Dist. No. 6, Lonoke county, will construct 12 mi. macadam road near Carlisle; plans being prepared by State Highway Com., H. R. Carter, Engr., Little Rock, Ark.

Ark., Star City.—Dist. No. 2, Lincoln county, will construct 21 mi. macadam road from Star City to Grady; plans being prepared by State Highway Com., H. R. Carter, Engr., Little Rock, Ark.

Fla., DeLand.—Volusia county, W. D. Bradshaw, Road Supt., Daytona, let contract to W. C. Cannons, DeLand, at \$1.25 per cu. yd., to resurface DeLand-Orange City Rd.; 1500 cu. yds. shell or marl.

Fla., Eustis.—Town will vote on bonds to pave streets with brick. Address Town Clerk.

Fla., Leesburg.—City, L. M. Johnson, Clerk, will construct 16,000 ft. cement sidewalks; bids opened Feb. 24; previously noted. (See Machinery Wanted.)

Fla., Palmetto.—City engaged J. B. McCrary Co., Atlanta, Ga., to supervise brick paving. W. B. Whitehead, Mayor. (Lately noted to have voted \$50,000 bonds.)

Fla., Tampa.—Board of Public Works, D. B. McKay, Chrmn., will grout with pitch filler brick pavement Polk St. from Ashley St. to Jefferson St., and Ashley St. from Harrison St. to Henderson Ave.; about 14,700 sq. yds.; bids until Feb. 17. (See Machinery Wanted.)

Fla., Tampa.—Board of Public Works opens bids Feb. 17 on about 29,610 sq. yds. vitrified brick paving on Walton, Jackson, Eunice, Caesar, Hampton, Ellamae, Washington, Fortune, Estelle and Kay streets, and Cumberland Ave.

Ky., Campbellsville.—Robinson Creek Turnpike Co., capital \$5000, inceptd. by Sam Barnett, Wade Johns, Chandler Wood and others.

Ky., Franklin.—Simpson county votes late in April on \$100,000 bonds to improve roads. Address County Commrs.

Ky., Louisville.—Board of Public Works will arrange for reconstruction of Main St. from Brook to 4th St. and from 5th to 13th St.; cost about \$50,000.

Ky., Louisville.—City contemplates paving Market St. from 34th St. to Western Parkway, 1¼ mi.; asphalt; vitrified brick gutters; estimated cost \$50,000. David R. Lyman, City Engr.

La., Alexandria.—Road Dist. No. 1, Rapides parish, will make proposed road improvements as soon as bonds (\$30,000) are sold.

La., DeQuincy.—City will construct about 90,525 sq. ft. concrete sidewalk and 14,486 lin. ft. curb; bids until Mch. 10; plans with Mayor and with T. H. Mandell, Engr., Lake Charles, La. (See Machinery Wanted.)

La., Gretna.—Jefferson Parish Police Jury let contract J. Y. Sanders, New Orleans, to construct roads in First and Second Road Dist., etc.; will purchase \$200,000 bonds.

La., New Iberia.—W. E. Gerens of Reny, La., has contract at \$19,176 to construct gravel and earth roadway 4½ mi. long, from New Iberia to St. Martin Parish line; Frank M. Kerr, Ch. Engr. State Board of Engrs., New Courthouse Bldg., New Orleans. (Lately noted.)

Md., Baltimore.—State Roads Com., O. E. Weller, Chrmn., 601 Garrett Bldg., asks bids until Feb. 26 to oil 8 sections State highway, about 420 mi., requiring about 1,225,000 gals. oil in Salisbury, Easton, Chestertown, Baltimore, Frederick, Cumberland, Hyattsville and LaPlata residences. (See Machinery Wanted.)

Md., Baltimore.—State Roads Com., O. E. Weller, Chrmn., 601 Garrett Bldg., asks bids until March 3 to build 5 sections State Highway, about 24.95 mi., in Allegany, Baltimore, Cecil and Garrett counties. (See Machinery Wanted.)

Md., Baltimore.—City let contracts aggregating \$165,000 for street paving; Baltimore Asphalt Block & Tile Co., Monroe and Lorman Sts., at \$199,234.90, Contract No. 78, portions of Harlem Ave., Franklin, Mulberry, Lexington and Calhoun Sts., sheet asphalt, 50,300 sq. yds.; P. Reddington & Sons, 321 St. Paul St., at \$57,487.34, Contract No. 81, portions of Fremont Ave. and Paca St., vitrified block, 16,000 sq. yds., and granite block, 2400 sq. yds.; Frank Marine, 9-11 South St., at \$4444.65, Contract No. 77, portions of Oliver and Trenton Sts. and Morton alley, vitrified block, 820 sq. yds., and granite block repaving, 800 sq. yds. R. Keith Compton, Chmn. Paving Com. (Call for bids lately noted.)

Md., Baltimore.—Paving Com., R. Keith Compton, Chrmn., decided to pave Baltimore St. from Harrison St. to Fremont Ave. with sheet asphalt; United Railways & Electric Co. will pave between tracks and 2 ft. on either side of tracks, probably placing concrete under ties and asphalt surface.

Md., Centerville.—Town will pave 1 mi. of street; proposes issuing \$10,000 bonds. Address Town Commrs.

Miss., Booneville.—City, H. E. Barnett, Clerk, asks bids until March 2 to grade, drain and surface several mi. of streets in connection with roads through city which are now under construction by county. (See Machinery Wanted.)

Miss., Hattiesburg.—Forrest County Supervisors authorized County Highway Com. to invite bids on nine additional mi. of roads in Beats 1 and 3.

Mo., Grant City.—City voted on \$3000 bonds to pave streets. Address The Mayor.

Mo., Joplin.—City let contract Ozark Paving Co. of Joplin at \$19,697.30 to pave Broadway from east approach of proposed viaduct to High St.; asphalt; about 10,000 sq.

yds.; V. C. Yantis, City Clerk. (Lately noted.)

Mo., St. Louis.—Board of Public Improvements let following contracts for street improvements: Wood block reconstruction, Eyerman Construction Co., at \$13,919.32; brick improvement, Eyerman Construction Co., Timothy E. Cavanagh and Ruecking Construction Co., total \$56,856.60; brick construction, Timothy E. Cavanagh and Ruecking Construction Co., total \$241.36; asphalt improvement, Barber Asphalt Paving Co., \$6539.71; grand total, \$91,547.99.

Mo., St. Louis.—Board of Public Improvements will receive bids until Mch. 3 to pave various streets, expending \$22,982 for bitulithic, \$68,158 for brick and \$13,739 for alley improvements.

N. C., Asheville.—City and Buncombe county will construct road from end of city paving on S. Main St. to bridge spanning Swannanoa River, on Biltmore Rd., to cost \$47,000; city to pay \$37,000 and county \$10,000; B. M. Lee, City Engr.

N. C., Dobson.—Mount Alry township of Surry county issued \$80,000 bonds to construct roads. Address County Commrs.

N. C., Lexington.—Board of Aldermen appropriated \$1000 to construct concrete sidewalks; property-owners to pay one-half of cost, making total expenditure \$2000. Address The Mayor.

Okla., Okemah.—Weleetka Township of Okfuskee county will expend \$25,000 during current year to construct about 25 mi. of road; work to be under supervision of State Highway Engr. and according to plans prepared by State Highway Com.

S. C., Barnwell.—Allendale Township of Barnwell county petitioned Legislature for authority to issue \$30,000 bonds to improve roads. Address County Commrs.

S. C., Greenville.—City will construct about 5000 sq. yds. sheet cement or tile sidewalk paving; bids until Feb. 19; C. P. Ballenger, City Engr.

S. C., Sumter.—Sumter county, P. M. Pitts, Supvr., will build lately-noted road by chain gang force; about 6 mi. new sand-clay road.

Tex., Bastrop.—Precinct No. 1 of Bastrop county voted \$50,000 bonds to construct roads. Address County Commrs. (Previously noted.)

Tex., Corsicana.—City let contract to construct paving in business section; cost \$52,000; J. A. Harper, City Secy. (Lately noted as asking bids on 24,251 sq. yds. paving.)

Tex., Corpus Christi.—Bishop Road Dist. of Nueces county let contract C. F. Harwood to construct 30 to 40 mi. macadam roads; main road to be 16 ft. wide and have gravel surface 11 in. deep; lateral roads to be 14 ft. wide; Mr. Harwood agreed to take \$100,000 bonds and \$4000 accrued interest in payment for work; John T. Bartlett, Commr. in charge; W. H. Pipplin, Engr., Dallas. (Lately noted.)

Tex., Dallas.—Municipal Commrs. let following contracts, aggregating \$48,000, for street paving: Standard Engineering & Construction Co., at \$23,473.52, Oakland Ave., Grand Ave. to city limits, Uvalde rock asphalt; R. C. Stubbs, at \$12,982.84, Garrett Ave., Ross to Live Oak, vibrolithic; Southern Westrumite Co., at \$7464.05, Munger Blvd., west side, Junius to Reiger St.; Texas Bitulithic Co., at \$4387, Griffin St., Elm to Pacific Ave.

Tex., Fort Worth.—City let contract General Construction Co., Fort Worth, at about \$52,000 to pave 24,251 sq. yds. of street with vitrified, vertical brick; asphalt filling on cement foundation.

Tex., Galveston.—Galveston County Commissioners receive bids until Feb. 25 for mudshell spread on county roads and building reinforced concrete bridges and culverts on mainland as follows: League City—Friendswood Rd., about 9½ mi.; League City—Kemah Rd. to Clear Creek, about 6 mi.; Kemah—San Leon Rd., about 5 mi.; Dickinson—San Leon Rd., about 9 mi.; Hitchcock—La Marque Rd., about 5 mi.; John M. Murch, County Auditor; lately noted. (See Machinery Wanted.)

Tex., Hillsboro.—Road Dist. No. 2 of Hill county votes February 21 on \$150,000 bonds to construct roads. Address County Commrs.

Tex., Houston.—City, E. B. Bonney, Secy., will construct about 20,000 sq. yds. gravel pavement; E. E. Sands, City Engr.; bids until Feb. 23. (See Machinery Wanted.)

Tex., Houston.—Magnolia Park Land Co., Carter Bldg., invites bids to construct 48,000 sq. ft. cement sidewalks in Central Park; Howe & Wise, Engrs., 722 First National Bank Bldg., Houston; specifications ready after Feb. 10. (See Machinery Wanted.)

Tex., Houston.—City, E. B. Bonney, Secy., will pave McKinney Ave. from Velasco to

east line of Eastwood Ave.; also construct standard combined curb and gutters on Crockett St. from Sawyer St. to White Oak bayou; cost of paving \$68,200; curbs and gutters, \$6000; bids until Feb. 20; E. E. Sands, City Engr. (See Machinery Wanted.)

Tex., McKinney.—Frisco Dist. of Collin county votes Mch. 14 on \$65,000 bonds to construct roads. H. L. Davis, County Judge.

Tex., McKinney.—Following districts of Collin county will vote Feb. 21 on bonds to construct roads: Farmersville, \$200,000; Celine, \$125,000; Princeton, \$100,000; Prosper, \$100,000; Culleoka, \$65,000. H. L. Davis, County Judge.

Tex., Victoria.—Road Dist. No. 5 of Victoria county votes Mch. 18 on \$125,000 bonds to construct roads. Address County Commrs.

Tex., Waco.—Justice Precincts 1 and 3, including city of Waco, and 17 precincts in McLennan county voted \$1,075,000 bonds for road construction. Address McLennan County Commrs. (Lately noted.)

Tex., Yoakum.—City votes Mch. 18 on \$40,000 bonds to improve streets. Address The Mayor. (Lately noted.)

Va., Richmond.—City let contract Atlantic Bitulithic Co., Richmond, Va., to lay 10,000 yds. bitulithic paving on Main St.

W. Va., Bluefield.—City will pave, curb and gutter with bituminous macadam Jefferson and Washington Sts. from Adams St. to Cumberland Gap turnpike; bids until Mch. 12; J. T. Akers, City Auditor. (See Machinery Wanted.)

W. Va., Fairmont.—Marion County Commissioners will soon invite bids on construction of 18 mi. brick and concrete roads in Mannington Dist.; J. Russell Wilson, C. E., Washington, Pa. (Lately noted to construct roads for which \$300,000 of bonds were authorized.)

W. Va., Huntington.—Board of Commrs., L. A. Pollock, Commr. of Streets, will grade, curb and pave with brick portions of 2d, 9th, Collis, Norway, Adams, Jefferson, Madison, 12th and Ballington Aves., 1st, 7th, 10th, 17th, 18th, 25th, 27th, Elm, Gallier, Short, Main, 16th and 28th Sts., and 6th Ave.; bids until Feb. 26 (extended date); A. B. Maupin, City Engr.; lately noted. (See Machinery Wanted.)

SEWER CONSTRUCTION

Ala., Attmore.—City, W. E. Rushing, Mayor, will construct sanitary sewer system; bids until Feb. 20. (See Machinery Wanted.)

Ala., Phenix City, P. O. at Columbus, Ga.—City is reported as contemplating construction of sewer system; Moss Harrison, Mayor.

Fla., Eustis.—Town will vote on bonds to construct sewers. Address Town Clerk.

Fla., Miami.—City, Wm. B. Moore, Clerk, will lay and install following sewer main and pipes: 8-in. terra-cotta sewer main on 6th St. from center of Avenue I to center of Avenue J, 550 ft.; ten 6-in. terra-cotta service sewer pipes extending from sewer main from center of Avenue I to center of Avenue J, 225 ft.; 8-in. terra-cotta sewer main on 9th St. from center of Avenue M to center of Avenue L and on Avenue L from center of 9th St. to Miami River, 894 ft.; fourteen 6-in. terra-cotta service sewer main from center of Avenue M to center of Avenue L and on Avenue L from center of 9th St. to Miami River, 315 ft.; bids until Feb. 19. (See Machinery Wanted.)

Fla., Palmetto.—City engaged J. B. McCrary Co., Atlanta, Ga., to supervise construction of sewer system. J. B. Whitehead, Mayor. (Lately noted to have voted \$15,000 bonds.)

Fla., Tampa.—Board of Public Works let following contracts amounting to \$690,945.13 to construct Imhoff sanitary sewer system: Sullivan & Groeson—Section 1, \$58,800; Section 2, \$17,900; Section 3, \$28,413; Section 5, \$129,728.88; Section 10, \$11,977. Edwards Construction Co.—Section 4, \$33,500. McNell, Davis & Webb—Section 6, \$110,274.55; Section 7, \$81,166.75; Section 8, \$136,751.50; Section 9, \$31,432.25; all of Tampa. Twombly & Henney, Engrs., 55 Liberty St., New York. (Lately noted.)

Ga., Columbus.—East Wynnton Drainage Co., capital stock \$2000, inceptd. by N. A. Brown, W. F. Lupo and M. J. C. Pollard; party-sewer system to drain about 100 houses at cost of about \$2000.

Ga., Columbus.—East Wynnton Drainage Co., capital stock \$2000, inceptd. by Nathan A. Brown, W. F. Lupo and M. J. C. Pollard to construct and operate sewers and culverts in East Wynnton.

Ga., Eastman.—City appropriated funds to complete sewerage-disposal plants; work previously suspended; Arthur Pew, Engr., Atlanta, Ga.

Ga., Tifton.—City votes Mch. 25 on \$1000 bonds to extend sewer system. Address The Mayor.

Ky., Louisville.—Board of Public Works let contract Edward Larsen at \$31,000 to construct sewer from 27th and Chestnut Sts. to Parkland.

La., Shreveport.—City will vote on \$1,000,000 bonds to purchase or construct sewer system and water-works. Address The Mayor.

N. C., Forest City.—Board of Aldermen engaged J. B. McCrary Co., Atlanta, Ga., to make surveys, prepare map and estimate cost of constructing sanitary sewer system.

N. C., Rowland.—Town will construct sewer system, water-works and electric-light plant; issued \$30,000 bonds; J. McR. Bracy, Mayor.

S. C., Greer.—City is reported to invite bids to construct sewer system, water-works and electric-light plant; \$67,000 bonds available. Address The Mayor.

N. C., West Asheville, P. O. at Asheville.—City voted \$50,000 bonds to construct sewer system and water-works. Address The Mayor. (Lately noted.)

N. C., Winston-Salem.—City will construct filtering bed on Salem Creek; also dredge creek for 30 mi. Address The Mayor. (J. L. Ludlow, Winston-Salem, lately noted as preparing plans.)

Okla., Bristow.—City engaged Benham Engineering Co., Oklahoma City, Okla., to prepare plans and specifications for sanitary sewer system; cost, including mains, district sewers and disposal plant, about \$40,000.

Tenn., Fayetteville.—City contemplates constructing sewers, expending \$60,000. Address The Mayor.

Tex., El Paso.—City voted \$100,000 bonds to extend sewer system. C. E. Kelly, Mayor. (Lately noted.)

Tex., Houston.—Hunter & Hunter of Oklahoma City, Okla., lately awarded contract to construct sewers, assigned contract aggregating \$21,000 to H. C. Gass to construct sewers on Rusk, Capitol, Texas, Prairie and several other streets. (Lately noted.)

Tex., Temple.—City perfected arrangements to acquire property of Temple Sanitary Co. and operate under municipal ownership; plans extension of mains and general improvements to plant; R. D. Morgan, City Engr.

Va., Ashland.—City votes Feb. 26 on \$40,000 bonds to purchase and maintain sewer system and water-works. Address The Mayor.

Va., Richmond.—Chas. E. Boiling, City Engr., submitted report to Administrative Board estimating cost of extending Canapa St. sewer to Gillie's Creek at \$20,707.

Va., Stuart.—City votes Mch. 24 on \$4000 bonds to construct sewer system. F. P. Burton, Mayor.

W. Va., Huntington.—City, L. A. Pollock, Commr. of Streets, Wharfs, etc., will construct certain lateral sewers, 10 and 12 in., in various alleys; also 18-in. trunk sewer in 4th St.; bids until Feb. 19; A. B. Maupin, City Engr. (See Machinery Wanted.)

W. Va., Huntington.—City will construct 3x3 ft. 8 in. trunk sewer in 7th St., about 1800 ft.; A. B. Maupin, City Engr.; bids until Feb. 26. (See Machinery Wanted.)

TELEPHONE SYSTEMS

Ga., Atlanta.—Southern Bell Telephone & Telegraph Co. issued \$5,000,000 bonds for improvements to system in its operating territory, embracing Georgia, Florida, North and South Carolina, Kentucky, Tennessee, Mississippi, Louisiana and portions of Illinois and Indiana; reported to expend \$500,000 in division improvements in Atlanta.

Ga., Thomasville.—Consolidated Telephone & Telegraph Co., capital stock \$250,000, incorporated by R. L. Stewart, W. A. Pringle, W. H. Rockwell and others.

Ky., Hartford.—Ohio County Farmers Mutual Telephone Co. increased capital from \$5000 to \$10,000.

N. C., Denton.—Denton Telephone Co., capital stock \$25,000, inceptd. by J. F. Cameron and J. W. Cashatt of Denton and C. C. Shaw of Lexington, N. C.

N. C., Hickory.—Sandy Ridge Telephone Co. organized with G. C. Eckard, Prest., and J. E. Huffman, Secy.-Treas.

Tex., Streetman.—Streetman Telephone Co., capital stock \$5000, inceptd. by C. A. Elliott, R. M. Thompson and S. G. Ward, Jr.

TEXTILE MILLS

Ala., Jacksonville.—Cotton Yarns.—Profile Cotton Mills will place in power plant 250 K. V. A. alternating-current generator; all ordered.

Ala., Piedmont.—Cotton Yarn.—Coosa Mfg. Co. will install tape drive frames to replace 22 spinning and 11 twister frames of old type; contract awarded.

N. C., Charlotte.—Cotton Goods.—Highland Cotton Mills, C. W. Johnson, Prest., is reported as seeking 800-acre site for large cotton mill and mill town.

N. C., Concord.—Cotton Yarn.—Franklin Cotton Mills will add to electric-drive equipment five 20 H. P. motors with auto switches and a switchboard; all ordered.

N. C., Elizabeth City.—Hosiery.—Avalon Mill (branch of Elizabeth City Hosiery Co.) organized with D. B. Bradford, Prest.; J. A. Kramer, V.-P.; P. H. Williams, Secy.-Treas.; erect 120x60-ft. brick and steel building costing about \$6000; install 160 knitting machines, electric-power drive, etc., costing about \$25,000; daily capacity 1200 doz. prs. hosiery; J. W. Martin, Engr., Archt. and Contr., Elizabeth City.

N. C., Gastonia.—Cotton Yarn.—Dunn Mfg. Co. will add, for electric drive, 23 motors, 5 to 35 H. P.; switches; contract awarded.

N. C., Greenville.—Cotton Yarns.—Greenville Cotton Mills let contract Gallivan Building Co., Greenville, S. C., to erect 316x50 ft. building, 80x70 ft. ell, 100x75 ft. storage warehouse, 150,000 gal. reservoir and 50,000 gal. tank 50 ft. high; cost about \$35,000; will install 5000 spindles, 200 H. P. steam plant, etc.; will soon award contract for cottages, machinery, etc.; R. C. Biberstein, Archt.-Engr., Charlotte. (Lately noted organized, etc.)

N. C., Greensboro.—Cotton Cloth.—Proximity Mfg. Co. will install 5 additional 25 H. P. motors and oil switches; all ordered.

N. C., Hickory.—Cotton Yarns.—A. A. Shuford Mill Co. will add 1200 new spindles and preparatory equipment; has let contract.

N. C., Landis.—Cotton Yarns.—Corriher Mills will install, for electric drive, 11 motors from 2 to 25 H. P., switches, switchboards, etc.; all ordered.

N. C., Lumberton.—Hosiery Yarns.—Jennings Cotton Mills will add 2000 spindles; contract awarded.

N. C., Old Fort.—Knit Goods.—Century Knitting Mills organized; F. A. Lukin, Prest.; C. F. James, V.-P.-Mgr.; F. M. Bradley, Secy.; as lately stated, will erect 150x75 ft. building and install 100 knitting machines. (Heretofore reported organized with \$125,000 capital, etc.)

N. C., Pineville.—Sheeting.—Chadwick-Hoskins Co., Charlotte, will install 5000 spindles for replacing warp frames in mill No. 5; has awarded contract.

Tenn., Knoxville.—Hosiery Yarns.—Knoxville Spinning Co. will add new machinery costing about \$6000; to include 1300 spindles and 2 speeders; has awarded contracts.

Tenn., Knoxville.—Underwear.—Appalachian Mills will install 10,000 spindles, 600 H. P. plant, etc., costing about \$150,000; daily capacity, 75,000 lbs. cotton yarn for underwear knitting; opens machinery bids April 1; lately noted purchasing Holston mill, planning enlargement, etc. (See Machinery Wanted.)

Tenn., Rogersville.—Hosiery, etc.—Rogersville Knitting Mill Co., capitalized at \$50,000, inceptd. by W. D. Harmon, H. G. Kyle, J. O. Phillips and others; establish mill to mfr. hosiery and other knit articles. (Lately noted.)

WATER-POWER DEVELOPMENTS

Ark., Heber Springs.—Arkansas Hydro-Electric Co., U. S. Bratton, Secy., will expend \$2,000,000 for hydro-electric plant; develop 10,000 H. P.; construct 3 dams; principal power dam 600 ft. long by 90 ft. high; 2 reservoir dams, 1400 ft. and 800 ft. long by 90 ft. high; reinforced concrete; also construct 100 mi. transmission line costing \$75,000; date of opening bids not determined; C. V. Smith, Engr., 1017 Southern Trust Bldg., Little Rock; Mr. Bratton previously noted as negotiating for water-power on Little Red River, near Heber Springs. (See Machinery Wanted.)

Ark., Little Rock.—Chas. A. Barton, Oak Park, Ill., has 25-year franchise to use water of White River and two tributaries for generating electricity; contemplates anchoring boats with water-wheel and electric equipment, instead of building dams; rumors state \$1,500,000 investment contemplated.

Ga., Eatonton.—Putnam Mills & Power Co. will construct concrete dam; let contract to Berry-Fortune Co., Augusta, Ga.

Mo., Linn Creek.—Central Missouri Power Co. will organize to construct hydro-electric plant to develop 3000 H. P.; plans to construct low dam giving about 25-ft. head, power-house and transmission line to connect several towns within 75 mi. of site; preliminary surveys being made by Burns & McDonnell, Kansas City; expenditure \$250,000, half of which will represent cost of power-house and dam; information furnished by Jesse J. Whisler, Secy.-Treas. Farragut Light & Power Co., Farragut, Iowa.

WATER-WORKS

Ark., Arkadelphia.—Arkansas Power Co., H. C. Couch, Prest., 308 State Nat'l Bank Bldg., Little Rock, Ark., is reported to expend \$15,000 in improvements to water-works and electric-light plant. (Lately noted to have acquired systems.)

Ark., Little Rock.—Arkansas Water Co., A. M. Lynn, Prest., Pittsburgh, Pa., will make improvements to water system, including reservoir at site 5 mi. above pumping station, so as to secure sufficient water supply from Arkansas River; increase capacity at once to 150,000,000 gals. and later to 300,000,000 gals.; cost \$434,000.

Fla., Bunnell.—Lambert & Moody, owners, contemplate incorporation and enlargement of water-works system. (See Electric Plants.)

Fla., Palmetto.—City engaged J. B. McCrary Co., Atlanta, Ga., to supervise improvement of water-works; W. B. Whitehead, Mayor. (Lately noted to have voted \$17,000 bonds.)

Ga., Amsterdam.—American Sumatra Tobacco Co. will build by company force reinforced concrete reservoir of 250,000 gals. capacity; Arthur Pew, Atlanta, Ga., will prepare plans and supervise work.

Ga., Marshallville.—City let contract to B. F. Roberts, Raleigh, N. C., to lay 1½ mi. 8, 6 and 4-in. cast-iron pipe and 14,000 ft. galvanized pipe; work also includes 200 taps with ¾-in. galvanized pipe run to curb, with stopcock and iron curb box. (Previously noted as letting contracts for machinery and supplies to construct 30,000-gal. water-works.)

Ga., Tifton.—City votes Mch. 25 on \$14,000 bonds to construct 250,000-gal. capacity stand-pipe, install air compressor and extend water mains.

Ky., Carlisle.—City let contract Mathias & Rogers of Carlisle to construct dam and reservoir for water-works; also let contracts to furnish motors and pumps, pipe, tank and tower; impounding reservoir to cover 7½ acres and have drainage of 235 acres; capacity 20,000,000 gals.; earth dam with concrete core; dam 400 ft. long, 100 ft. thick at base and 25 ft. at top, and 20 ft. high; pumping station and 2 pumps; steel tank with capacity 60,000 gals.; tank 90 ft. from ground to base, and tank proper 22 ft. high; 23 fire hydrants; mains 10, 8 and 6 inches; Arthur Marshall Morgan of Chicago, Ill., prepared plans. (Call for bids lately noted.)

Ky., Campbellsville.—Campbellsville Public Utility Co., H. B. McElroy, Secy., Springfield, Ky., will expend \$20,000 to \$25,000 on lately-noted water-works; capacity 50,000 to 150,000 gals.; pump-house; contracts let for pipe, valves, fire plugs and standpipe; will receive bids on laying mains and building reservoir and filter; H. K. Bell, Engr., Lexington, Ky. (See Machinery Wanted.)

Ky., Henderson.—Water Commrs. are reported as contemplating installation of 2 boilers at municipal water-works.

La., Hammond.—City voted \$18,000 water-works bonds; T. R. Thomas, Commr. of Finance.

La., Shreveport.—City will vote on \$1,000,000 bonds to purchase or construct water-works and sewer system. Address The Mayor.

Md., Baltimore.—Board of Awards, John Hubert, Acting Prest., will install filter equipment at Lake Montebello, contract No. 22; bids until Feb. 25 (extended date); plans and specifications at office of Water Dept., Ezra B. Whitman, Water Engr., City Hall; lately noted. (See Machinery Wanted.)

Miss., Tunica.—City is having plans prepared by Fairbanks & Co., New Orleans, La., for water-works; capacity 40,000 gals.; erect 50,000-gal. tank; cost \$10,000; date of opening bids not set. (Lately noted as to vote Feb. 28 on \$10,000 bonds.)

Mo., Chillicothe.—City Water Co. petitioned City Council for 10-yr. franchise; proposes to erect filter plant.

N. C., Forest City.—Board of Aldermen engaged J. B. McCrary Co., Atlanta, Ga., to make surveys, prepare map and estimate cost of extending water-works.

N. C., Hazelwood.—Town will construct water-works and electric-light plant; issued \$15,000 bonds. W. H. Cole, Chrmn., Finance Committee.

N. C., Rowland.—Town will construct water-works, sewer system and electric-light

plant; issued \$30,000 bonds; J. McR. Bracy, Mayor.

N. C., Spencer.—City will probably install pumping machinery for drilling well; daily capacity of water-works, 60,000 gals.; extensions will be taken care of locally; C. G. Thieling, Mayor. (Lately noted as purchasing Spencer Water Co.'s plant at \$29,185.)

N. C., West Asheville, P. O. at Asheville.—City voted \$50,000 bonds to construct water-works and sewer system. Address The Mayor. (Lately noted.)

Okla., Henryetta.—City votes Feb. 17 on \$20,000 bonds to improve water-works. Address The Mayor.

Okla., Poraker.—City is issuing \$25,000 water-works bonds. Address The Mayor.

Okla., Shattuck.—City will install electric motors and electrically-driven pump; capacity water-works 288,000 gals.; A. F. Breunke, Supt., Gage, Okla.; lately noted.

S. C., Camden.—City let contract to B. F. Roberts, Macon, Ga., to lay 5000 ft. 10-in., 4500 ft. 12-in. and 450 ft. 6-in. water mains. (General construction contract lately noted let to Tucker & Laxton, Charlotte, N. C., at \$61,976.50.)

S. C., Greer.—City is reported to invite bids to construct water-works, sewer system and electric-light plant; \$67,000 bonds available. Address The Mayor.

Tex., Aransas Pass.—City engaged M. Griffin O'Neil & Sons of Dallas, Tex., to prepare plans and specifications and supervise construction of water-works and electric-light plant; daily capacity, 75,000 to 100,000 gals.; brick building, 20x30 ft.; 75,000-gal. stand-pipe and 75,000-gal. reservoir; bids to be opened about April 1; issued \$22,000 bonds; Jesse J. Todd, Mayor. (Lately noted.)

Tex., Denton.—City contemplates constructing additional \$250,000-gal. reservoir; Water-works Comm. of Council is securing plans. Address The Mayor.

Tex., El Paso.—City voted \$150,000 bonds to improve water-works. C. E. Kelly, Mayor. (Lately noted.)

Tex., Mission.—Chamber of Commerce interested in proposition to build water-works, ice factory and electric plant.

Tex., Pilot Point.—City voted \$14,000 bonds to construct water-works. Address The Mayor.

Tex., Somerville.—City will install water-works; M. Griffin O'Neil & Sons, Dallas, Tex., preparing plans and specifications; bids to be asked.

Va., Ashland.—City votes Feb. 26 on \$40,000 bonds to purchase and maintain water-works and sewer system. Address The Mayor.

Va., Roanoke.—Silver Springs Water Co., capital \$100,000, inceptd.; C. Markley, Pres.; W. L. Andrews, Secy.-Treas.

Va., Stuart.—City votes Mch. 24 on \$60,000 bonds to construct water-works; F. P. Burton, Mayor.

WOODWORKING PLANTS

Ark., Little Rock—Veneer.—T. B. Ashby, Jackson, Tenn., is reported to have purchased site on which to build \$100,000 veneer plant.

Ark., Little Rock—Timber Products.—Southern Timber Products Co., capital \$10,000, inceptd.; Lee Young, Pres.; A. C. Read, Treas.; W. K. Neible, Secy.

Ark., Pine Bluff—Veneer.—Morgan Veneer Co. (care of Chamber of Commerce) will establish veneer plant; acquired about 75,000,000 ft. gum timber in Sabine River Valley.

Ky., Louisville.—Gambinus Cooperage Co. is reported to rebuild plant at 940 Mason Ave. burned at estimated loss of \$39,000.

La., Morley—Cooperage.—Morley Cypress Co. contemplates erecting plant to mfr. slack-barrel cooperage.

Md., Cumberland—Locust Pins.—F. C. Hendrickson, 17 Water St., will install plant to mfr. locust pins; output not determined.

Miss., Hattiesburg—Blinds, Doors, etc.—G. W. Doster and R. I. Logan of Hattiesburg and D. E. Moore of Macon, Ga., purchased Carley Mfg. Co.'s plant; will remodel and operate for mfr. of blinds, doors and sash.

N. C., Kingston—Buggies.—B. A. Hudson & Co. let contract to J. S. Rochelle, Kingston, to erect 50x75-ft. 3-story ordinary construction building; manufactures buggies; 6 daily.

N. C., Winston-Salem—Furniture.—Fletcher Furniture Co., capital stock \$50,000, inceptd. by J. W. Fletcher, N. M. Fletcher, Geo. T. Shelton, A. H. Shelton and others.

Tex., Fort Worth—Sashes and Doors.—Tarrant County Planing Mill Co. reorganized with \$50,000 capital stock by W. H. Eddie-man, O. P. Haney and L. L. Hawes; pur-

chased Texas Building Co.'s planing mill on Arlington Heights Blvd. and contemplates installing box factory.

Tex., Paris—Crates, Baskets, etc.—Cummer Mfg. Co. increased capital stock from \$50,000 to \$140,000.

Va., Emporia—Veneer.—Goodwyn, Schwartz & Rowan Corp. changed name to Old Dominion Veneer Co. and increased capital stock from \$50,000 to \$70,000.

Va., Lynchburg—Buggies and Wagons.—Hill Buggy & Wagon Co., capital \$50,000, inceptd.; W. W. Hill, Pres.; J. F. Pugh, Secy.

Va., Norfolk.—General Wood Encyusting Co., capital \$100,000, inceptd.; R. A. Marr, Pres.; Norfolk; William F. Morgan, Secy., Boston, Mass.

FIRE DAMAGE

Ala., Birmingham.—Farmers & Ginn's Cottonseed Oil Co.'s cottonseed-house; loss \$90,000.

Ala., Birmingham.—Dr. Wyatt Hedfin's residence at 3216 Cliff Rd.; loss \$15,000.

Ala., Birmingham.—Morgan & Winters drug store at Terminal Station; loss \$5000.

Ala., Eufaula.—Mrs. Edwina Hayes' residence; loss about \$6000.

Ala., Gadsden.—Johnson Sales and Feed Stables on Broad St.; loss \$5000 to \$7000.

Ala., Mobile.—F. J. Washcheks residence at S Chamberlain Ave.; loss \$5500.

Ala., Red Bay.—R. L. Neighbors' store; Brice Bond's building; O. O. Wade's building; T. A. Bullard's building; Dr. O. Copeland's building; Misses Riddle's store; Tiffin Hardware & Furniture Co.'s store.

Ala., Tuscaloosa.—Buck Bros. and Sun Lee buildings, occupied by Cochran & Simpson, and Tinsley Shoe Shop, owned by Col. T. C. McCortey, and building of J. L. Bonds; loss about \$16,000.

Ark., Little Rock.—Little Rock Turn Verein hall, at 14th and Commerce Sts., loss \$12,000; Adam C. Penzel, Treas.

Ga., Adairsville.—T. J. Nolan's dwelling; loss \$8500.

Ga., Rossville.—H. G. Dunn's store building, occupied by Cook Bros.; H. G. Dunn's residence; Jeff DeFreese's residence; Chas. Robinson's residence.

Ky., Lexington.—C. B. Gilman's building at 621 Manchester St., occupied by T. C. Bayless Brokerage Co. and National Biscuit Co.; loss on building \$5000.

Ky., Louisville.—Gambinus Cooperage Co.'s plant at 940 Mason Ave.; estimated loss \$39,000.

La., New Orleans.—Southern States Alcohol Mfg. Co.'s plant; loss about \$200,000.

La., St. Francisville.—Mrs. E. G. Westmoreland's residence; loss several thousand dollars.

Md., Baltimore.—St. Regis Apartments at 1821 Guilford Ave., owned by William B. Wheeler, 223 St. Paul St.

Md., Baltimore.—Pennsylvania R. R.'s immigrant pier, U. S. bonded warehouse and pier 3 at foot of Clinton St., Canton; estimated loss on buildings, \$50,000. Alex. C. Shand, Ch. Engr., Philadelphia, Pa.

Md., Hagerstown.—Warehouse Standard Oil Co.; loss several thousand dollars; main office, 26 Broadway, New York.

Md., Roland Park.—Roland Apartment-house, Roland and Gladstone Aves., Tuxedo Park; building owned by Vincent de Pasquale.

Mo., Carrollton.—Dr. M. W. Craton's dwelling; loss \$7000.

Mo., Kansas City.—Building at 1400 E. 12th St., occupied by S. M. Lore, Cochran & Sons Grocery Co. and others; loss \$5000.

Mo., Liberty.—Brown Building; loss \$75,000.

Mo., Midway, R. F. D. from Columbia.—Tumseh mining plant, owned by Jesse M. Short of Kansas City and others.

Mo., Randolph.—"Lowalsie," residence of Jefferson D. McFarland of McFarland & Black Commission Co. of Kansas City, Mo.

N. C., Goldsboro.—H. Well & Bro.'s brick plant.

N. C., Hickory.—D. L. Russell's residence; loss \$4500.

Okla., Chickasha.—Farmers' gin, owned by A. D. Brown of Anadarko, Okla.

Okla., Jet.—Silver Blackledge's store; loss \$9500.

S. C., Aiken.—"Red Top," home of H. H. Hunneywell of Boston, Mass.; loss \$11,000.

S. C., Columbia.—Residence of Henry Chapman in Colonial Heights; loss \$3000.

Tenn., Dunlap.—Dunlap Milling Co.'s flour and grist mill; estimated loss \$17,000.

Tenn., Lexington.—Southern Foundry & Machine Co.'s plant; estimated loss \$17,000.

Tenn., Milan.—T. H. Robinson's residence; loss \$3000.

Tex., Belton.—Belton Gin & Cotton Co.'s plant; loss \$12,000.

Tex., Calvert.—Mrs. I. R. Orviss' store building, occupied by Roland Drug Store; loss \$4500.

Tex., Onalaska.—About 300 ft. of Brushy Bridge, on Beaumont & Great Northern R. R.; W. P. Danforth, Supt., Trinity, Tex.

Tex., Dallas.—J. R. Driver's building at 419 Ross Ave.; loss \$4500.

Tex., Guthrie.—King county courthouse; loss \$25,000. Address County Comms.

Tex., San Marcos.—Warehouse of Walker Bros. Co. of Austin, Tex.

Tex., Timpson.—Buildings owned by T. C.

Johnson, B. J. Hawehorne and Mrs. Ida Keeling; loss \$15,000.

Tex., Taylor.—First Christian Church building; loss \$50,000. Address The Pastor.

Va., Bedford City.—Geo. Miller, Jr.'s, store.

Va., Blackstone.—Blackstone Academy; loss \$20,000; E. L. Ligon, Pres.

Va., Cape Charles.—Cherrytone Lodge, owned by H. R. Deacon; loss \$15,000.

Va., East Radford.—C. C. Brown's livery stable, owned by Frank and Emmet Robertson; loss \$3000.

Va., Rio.—D. R. Hunt's residence; loss \$10,000 to \$12,000.

Va., Honaker.—Rice Store Bldg., occupied by R. E. Hawley.

W. Va., Charles Town.—Caldwell Tyler's residence.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

D. C., Washington.—Arthur Carr, 1101 E St. N. W., has plans by Cloughton West, 1416 Chapin St. N. W., Washington, for apartment-house at 2715 Woodley Rd. N. W.; cost \$10,000.

Ky., Louisville.—Mrs. Frank Bilger will erect frame apartment-house at 422 E. Oak St.; cost \$4000.

Ky., Louisville.—T. L. C. Nugent will erect brick apartment-house at 1415 S. 2d St.; cost \$3000.

La., New Orleans.—Mrs. Geo. H. Maclean will expend \$5000 to erect duplex apartment-house; ordinary construction; slate roof; hot-air heat; W. C. Keenan, Archt., 208 Wels Bldg., New Orleans. (Lately noted.)

Mo., Kansas City.—H. Denewitz will erect apartment-house and store at 2310 Vine St.; cost \$3500.

Mo., Kansas City.—Thos. Empson will erect apartment-house at 1238-40 Washington St.; brick and stone; 7 suites; cost \$4000.

Mo., St. Louis.—Carl S. Holberg and Chris Knudsen are reported to erect double flats on McKee Ave.

Mo., St. Louis.—Arden L. Gray is reported to erect 5 and 6-room flat on Lafayette Ave.

Mo., St. Louis.—John C. Greulich Realty Co. will erect apartment-house on Farlin Ave.; cost \$6000.

Mo., St. Louis.—Miss Henrietta Hauck is reported to erect 2 double flats of 5 and 6 rooms each.

Mo., St. Louis.—Vincent A. Chinberg will erect 2 three-story apartment-houses on Lafayette Ave.

Mo., St. Louis.—Arthur Hess will erect store and apartment building at 3212-14 Cherokee St.; cost \$8800.

Mo., St. Louis.—Theo. Degenhardt will erect 2-story flat at 1327-29 Gravois St.; cost \$5000.

Mo., St. Louis.—Regal Realty & Investment Co. will erect 2-story tenement-house and store at 6979-83 Gravois St.; cost \$7500.

Mo., St. Louis.—Thos. E. Taylor will erect 2-story tenement-house at 4569-71 Wichita St.; cost \$4700.

Tex., El Paso.—J. E. Bischoff will erect tenement-house in Campbell's Addition; cost \$4000.

Mo., St. Louis.—Clem Degenhardt will erect 2 two-story flats at 3329-35 Lemps St.; cost \$10,000.

Mo., St. Louis.—Leisner Realty & Building Co. will erect 3 double flats of 4 and 5 rooms on McKee Ave.

Tenn., Chattanooga.—Hall Bros. are reported to have plans by Barnwell & Jones, Chattanooga, for apartment-house at McCalle Ave. and A St.; 3 stories; 65x130 ft.; 34 two and three-room suites; cost \$40,000.

Tex., Houston.—Pat Foley will erect apartment-house at Fannin and Isabella Sts.; cost \$11,000.

Tex., Houston.—J. E. McAshan will erect building at Main and Leeland Sts.; 3 stories; first floor will contain 6 stores and 2 garages; second and third floors, 12 apartments; reinforced concrete.

Tex., San Antonio.—W. Stevens will erect apartment-house on Lewis St.; cost \$5000.

Tex., San Antonio.—A. G. Dugger will erect apartment-house at Romana and Augusta Sts.; wing on each side of paved court. Mr. Dugger wires Manufacturers

Record: "Building will be 100x125 ft.; 8 stories; concrete and brick construction; architect not selected; approximate cost \$125,000.

Va., Richmond.—Davis Bros., Inc., will expend \$40,000 to erect apartment-house; 44.9x116.3 ft.; mill construction; slag roof; steam heat; plans and construction by owner. (Lately noted.)

W. Va., Martinsburg.—Louis E. Gerling estate is reported to erect store and apartment building.

ASSOCIATION AND FRATERNAL

Ala., Tuscaloosa.—University Masonic Club, C. B. Sims, Pres., Talladega, Ala., will erect \$12,000 clubhouse near the campus.

Ark., Hope.—R. P. O. E. purchased site on N. Elm St. and will erect lodge building.

Ark., Little Rock.—Little Rock Turn Verein, Adam C. Penzel, Treas., is reported to rebuild hall reported burned at loss of \$12,000.

Ky., Louisville.—Y. W. C. A. is reported to erect building to cost \$200,000.

Ky., Louisville.—Y. M. H. A. will erect building; 4 stories; brick, stone and reinforced concrete; tile roof; cost (without mechanical equipment) \$90,000; bids opened Mch. 10; Joseph & Joseph, Archts., Louisville. (Previously noted.)

N. C., Leakesville.—J. U. O. A. M. is reported to erect building; 3 stories.

Okla., Muskogee.—Y. M. C. A. opens bids after Mch. 10 to remodel building; 125x175 ft.; semi-fireproof; heating plant to be supplied; remodel and rewire lighting plant to cost \$1000; install 8 showers and 5 tubs; swimming pool 60x29 ft., 4 to 8 ft. deep; dormitories to accommodate 88; ground floor to contain lobby, cafeteria, reading-rooms, boys' department, etc.; refiltering system for pool; total cost \$25,000; A. A. Traver, Archt., Oklahoma City; address proposals to C. H. Teusmacker. (Lately noted.)

Okla., Tulsa.—Y. M. C. A. will expend \$100,000 to erect building; 4 stories; ordinary construction; steam heat; electric lighting; Shattuck & Hussey, Archts., 19 La Salle St., Chicago, Ill. (Lately described.)

Tenn., Chattanooga.—United Order of Odd Fellows (colored) purchased site on A St. and will erect temple to cost about \$15,000.

Tex., Galveston.—Galveston Council No. 787, J. M. Maurer, Chmn. of Bldg. Comm., is reported to erect club and lodge building.

Va., Bedford City.—P. J. Moran, Salt Lake City, Utah, is reported to sublet entire construction of home for B. P. O. E., for which he has general contract; plans by Ottenheimer, Stern & Reichert, 105 W. Monroe St., Chicago, call for 9 buildings, covering space 700x700 ft.; fireproof; low pressure vacuum heating system; electric lighting; tile and composition roof; cost about \$300,000. Previously noted.)

Va., Roanoke.—Y. M. C. A., C. Markley, Chrmn. Building Comm., will expend (without mechanical equipment) \$125,000 to erect building; 80x95 ft.; 5 stories; slag roof; plans by Louis E. Jallade, New York, and H. M. Miller, Roanoke, Associated Archts., ready in about 4 weeks. (Previously noted.)

BANK AND OFFICE

Ala., Dothan.—J. R. Young will erect store and office building. (See Stores.)

Ga., Macon.—Citizens' National Bank selected W. L. Stoddard, 30 W. 38th St., New York, as architect for building at 3d and Cherry Sts.; "reported to have stone and

marble front; steel work, marble and terrazzo construction in interior; fireproof; 3 passenger elevators; Mr. Stoddard wires Manufacturers Record: "Building 40x100 ft.; 12 stories; ground floor for banking room; 175 offices; steel frame; plans ready April 15; cost about \$200,000. (Lately noted.)

Ky., Frankfort.—State National Bank postponed indefinitely erection of building. (Previously noted.)

N. C., Brevard.—L. L. Jenkins, Asheville, and Brownlow Jackson, Hendersonville, N. C., are reported interested in erecting bank building.

N. C., Burlington.—Jos. A. Isley will erect store and office building. (See Stores.)

N. C., Canton.—Champion Lumber Co. will erect building to replace burned office building at Spruce.

N. C., King.—Bank of King, V. T. Grubbs, Pres., is reported to erect building; 21x15 ft.; 2 stories; fixtures purchased.

N. C., Statesville.—People's Loan and Savings Bank contemplates erecting building.

Okla., Tulsa.—Wm. J. Trimble is reported to erect store and office building. (See Stores.)

Tenn., Memphis.—A. L. Pritchard of Pritchard Bros. Co. is reported to erect office, warehouse and manufacturing building. (See Warehouses.)

Tenn., Memphis.—Building Comm. of Court Avenue Presbyterian Church, Frank S. Elgin, Chmn., is reported contemplating erection of office building on present church site; 15 or 20 stories; provided with gymnasium, reading-rooms, etc.; plan is to provide church quarters in new structure or in rear of office building; cost \$350,000.

Tenn., Murfreesboro.—Citizens' Trust Co. will erect bank building; cost \$35,000.

Tenn., Murfreesboro.—First National Bank will erect building. (See Machinery Wanted.)

Tenn., Sweetwater.—Serrigs estate is reported to erect stores and offices. (See Stores.)

Tex., Amarillo.—C. K. Chanslow will rebuild structure occupied by Amarillo Bank & Trust Co. (Lately reported damaged by fire.)

Tex., Fort Worth.—T. P. Finnegan, 1209 Elm St., and others have plans for office and theater building. (See Theaters.)

Tex., San Antonio.—Alamo National Bank will erect 3-story addition to structure on Commerce St.; cost about \$60,000.

CHURCHES

Ala., Abanda.—Baptist congregation, J. D. Ray, Secy., will erect building.

Ala., Birmingham.—St. John Institutional A. M. E. Church, Rev. P. W. Walls, pastor, has plans by W. A. Rayfield & Co., Box 649, Birmingham, for church building and parish-house; 70x120 ft.; cost (without mechanical equipment) \$80,000; semi-fireproof; tile roof; steam heat; gas and electric lighting; 20 classrooms; swimming tank, kitchen, dining-room, library, lecture-room and roof garden; art glass; tile aisles and vestibule; oak finish inside; steel construction in roof. Address Architects.

Ala., Guntersville.—Methodist congregation will erect \$12,000 building. Address The Pastor.

Ala., Mobile.—Rev. Edw. McGrue is reported interested in erecting frame church; cost \$3000.

Ala., Tuscaloosa.—W. A. Rayfield & Co., Box 649, Birmingham (not Tuscaloosa, Ala., as lately reported) is preparing plans for building for Baileys Tabernacle.

Ark., Rison.—Baptist Church is reported to erect building. Address The Pastor.

Ark., Helena.—St. John's Episcopal Church, Rev. W. M. Walton, rector, is reported to rebuild structure lately noted burned at loss of \$30,000.

Ark., Murfreesboro.—Methodist Episcopal Church South is reported to erect building. Address The Pastor.

Fla., Macclenny.—Methodist church, Rev. G. A. Davis, pastor, contemplates erecting building; cost \$6000 to \$8000.

Fla., Wauchula.—Methodist Episcopal Church, Rev. J. L. Griffiths, pastor, opens bids March 15 to erect building; 75x100 ft.; cost \$10,000; fireproof; brick; galvanized iron shingle roof; electric lighting to cost \$109; J. B. Long and M. A. Falsom, Architects, Wauchula; lately noted. (See Machinery Wanted.)

Ga., Bainbridge.—First Baptist Church adopted plans for building; cost \$15,000; W. C. Mathis, E. J. Willis, A. J. Callahan and others, Bldg. Comm.

Ga., Columbus.—West Side Baptist Church

is reported to erect annex for Sunday-school. Address The Pastor.

Ga., Milledgeville.—First Methodist Church, Rev. Elam F. Dempsey, pastor, contemplates completing church.

Ky., Louisville.—St. Elizabeth's Roman Catholic Church, Rev. Jno. Assent, pastor, opens bids Feb. 20 to erect building; 90x132 ft.; cost (without mechanical equipment) \$50,000; fireproof floor; steel trusses and purlins; asbestos shingle roof; steam heat; Fred Erhart, Archt., 409 Norton Bldg., Louisville. (Lately noted.)

La., Alexandria.—Emmanuel Baptist Church, Rev. W. J. Cox, pastor, has plans by R. H. Hunt, Chattanooga, Tenn., for Sunday-school building.

La., Baton Rouge.—First Baptist Church will erect building at 5th and Convention Sts.; cost \$30,000. Address The Pastor.

La., New Orleans.—Dominican Fathers are reported to erect church and school buildings. (See Schools.)

Mo., St. Louis.—Immanuel Baptist Church, Rev. John W. Crouch, pastor, is reported to erect building.

N. C., Forest City.—Baptist church opens bids Mch. 15 to erect building to seat 700; cost (without mechanical equipment) \$14,000; brick; slate roof; hot-air furnace; electric lighting; cement and concrete sidewalks; J. M. McMichael, Archt., Charlotte. Address proposals to Rev. J. O. Adams, Charlotte. (Lately reported.)

N. C., Paw Creek.—Rev. S. F. Conrad, Charlotte, N. C., is reported promoting erection of Baptist Church.

S. C., Walhalla.—Walhalla Presbyterian Church, Rev. Geo. M. Wilcox, pastor, will erect building; cost \$10,000.

Tenn., Cleveland.—Methodist Episcopal Church South, Rev. Mr. Fogleman, pastor, is reported to erect building.

Tenn., Knoxville.—Christian Church is reported to erect building. Address The Pastor.

Tenn., Knoxville.—Park Avenue Church of Christ is reported to erect building. Address The Pastor.

Tenn., LaVergne.—Presbyterian church will erect building. Address The Pastor.

Tenn., Memphis.—Building Comm. of Court Avenue Presbyterian Church, Frank S. Elgin, Chmn., is reported to provide church quarters in proposed office building or on lot in rear of same. (See Bank and Office.)

Tenn., Murfreesboro.—Baptist church will erect building. Address The Pastor.

Tex., Belton.—First Methodist Church will erect building; cost \$25,000. Address The Pastor.

Tex., Dallas.—Munger Place Methodist Episcopal Church South, Rev. Lawrence L. Cohen, Jr., pastor, is reported to erect temporary building at Eastmoreland and Munger Blvd.; cost \$5000.

Tex., Dallas.—Church of Christ will erect brick building at 505 Center St.; cost \$3500. Address The Pastor.

Tex., Pleasanton.—Rev. S. C. Dunn is reported promoting erection of Methodist Church in north addition of city.

Tex., Rogers.—H. D. Pampel, Archt., Temple, Tex., states bids will be advertised about Mch. 15 to erect building for First Baptist Church. (Previously noted to cost \$20,000.)

Tex., Victoria.—First Baptist Church, F. M. Poole, Clerk, First National Bank Bldg., will erect building.

Tex., Texas City.—First Baptist Church will erect tabernacle. Address The Pastor.

Va., Alexandria.—Second Baptist Church has plans by W. P. Kerick for building at King and Peyton Sts.; brick; 40x30 ft.; cost \$10,000.

Va., Portsmouth.—Central Methodist Episcopal Church is reported having plans prepared by B. F. Mitchell, Norfolk, for improvements, including \$8000 Sunday-school building with frontage of 28 ft., \$2000 heating system and other improvements to cost \$2000. (Lately noted.)

Va., Richmond.—Highland Park Methodist Church, Rev. Clayton O. Tuttle, Pastor, will erect church building on site of present structure; brick; cost about \$10,000; plans have been prepared.

Va., Roanoke.—Greene Memorial M. E. Church will have plans prepared by C. H. Hinnant for Sunday-school building; 2 stories; brick and stone; 75x90 ft.; slate roof; electric lights; cost \$38,000. (Lately noted.)

Va., Roanoke.—High Street Baptist Church, Rev. J. H. Burks, pastor, 23-25 High St., plans to rebuild burned church and parsonage; loss about \$40,000. (Lately noted burned.)

CITY AND COUNTY

Ark., Argenta.—City Hall.—City, J. P. Fancette, Mayor, opens bids Mch. 10 to erect city hall at 3d and Main Sts.; 54x148 ft.; reinforced concrete; white enamel terra-cotta or algonite facing on front and side; fireproof; gravel roof; vacuum steam heat; electric lighting; prism sidewalk lights; cost \$75,000; J. L. Howard, Archt., Little Rock, Ark., may be addressed. (Lately noted.)

Fla., Tampa.—Library.—Board of Public Works is inviting plans for Carnegie library at 7th Ave. and Franklin St.; cost \$50,000.

Ga., Chatsworth.—Jail.—Murray county will vote Mch. 1 on \$15,000 bonds to erect jail. (See Courthouses.)

La., New Orleans.—Market.—City, A. G. Ricks, Commr. of Public Finances, will advertise for bids within 20 days to remodel building at St. Claude and St. Rock Aves. for market; cost (without mechanical equipment) \$15,000; E. A. Christy, City Archt. (Lately described.)

Mo., St. Louis.—Morgue.—City is considering erection of morgue on site of present structure at 12th and Spruce Sts.; cost \$60,000. Address The Mayor.

N. C., Charlotte.—City Hall.—Jas. A. Jones, Chmn. of Building Comm., may be addressed relative to remodeling city hall. (Lately noted to cost \$6000.)

N. C., Wilmington.—Jail.—New Hanover county opens bids about Mch. 10 to erect jail; main building 156x42 ft.; wing 34x100 ft.; cost (without mechanical equipment) \$25,000 to \$30,000; semi-fireproof and reinforced concrete construction; built-up roof; steam heat to cost \$3000; electric lighting; Jas. F. Gause, Jr., Wilmington, Archt., to whom proposals may be addressed; previously noted. (See Machinery Wanted.)

Okla., Okmulgee.—Jail.—Okmulgee county votes Mch. 24 on \$110,000 bonds to purchase site and erect courthouse and jail. Address County Commrs.

Tex., Beaumont.—Hospital.—Jefferson county votes May 15 on \$140,000 bonds to erect and equip hospital. Address County Commrs.

Tex., Hutchins.—Poor Farm.—Dallas County Commrs. rejected bids to erect hospital and will receive new bids until Feb. 28; Woerner & Cole, Architects, Sumpter Bldg., Dallas.

Tex., Polytechnic.—City Hall.—City will erect municipal building to contain fire hall, jail and cells on lower floor and city hall on upper floor; 2 stories; brick; 28x10 ft.; cost \$35,000. Address The Mayor.

Tex., San Antonio.—Fire and Police Stations.—City will erect 2 combination fire and sub-police stations on Culebra Ave. near Zarzamora St. and Delmar near S. Mittman St.; 2 stories; reinforced concrete; cost \$12,000 each; voted bonds. Address The Mayor.

Tex., Yorktown.—City Hall.—City will expend \$8000 (without mechanical equipment) to erect city hall and jail; 36x60 ft.; ordinary construction; tin roof; Kreisle & Kleuser, Architects, 421 Scarborough Bldg., Austin. Address proposals to City Secy., Yorktown State Bank. (Lately noted to receive bids until Feb. 27.)

Va., Petersburg.—Administration.—City is reported planning \$200,000 bond issue to erect municipal administration building, auditorium and armory.

Va., Richmond.—Rest Station.—Carneal & Johnston, Architects, Chamber of Commerce Bldg., state city's plans for rest station at William Byrd Park have been abandoned. (Previously noted.)

COURTHOUSES

Ala., Andalusia.—Covington County Commrs. are reported as considering erecting courthouse.

Ga., Chatsworth.—Murray county will vote Mch. 13 on \$45,000 bonds to erect \$30,000 courthouse and \$15,000 jail. Address County Commissioners.

Okla., Okmulgee.—Okmulgee county votes Mch. 24 on \$110,000 bonds to purchase site and erect courthouse and jail. Address County Commrs.

W. Va., Beckley.—Raleigh County Commissioners plan to expend \$15,000 to \$20,000 to improve courthouse; tentative plans call for removing 6 in. of brick wall and replacing with light colored pressed brick, erection of 3 additional rooms and fireproof vault in rear, replacing present tower with clock tower, etc.

DWELLINGS

Ala., Alpine.—Chas. A. Killough has plans by P. O. Randall, Ashland, Ala., for residence; frame; asphalt roof; open fireplaces; brick porch columns; wood cornices; cost \$3500; day labor.

Ala., Birmingham.—Woodlawn Realty &

Development Co. will erect two 2-story frame dwellings; cost \$2000 each.

Ala., Fayette.—Judge Ed Goodwin has plans by R. E. Posey, 514 Brown-Marx Bldg., Birmingham, to remodel residence; frame; cost from \$3000 to \$4000.

Ala., Montgomery.—Will T. Sheehan, care of Montgomery Advertiser, is having plans prepared by Smith & Carter, Montgomery, for residence; 2 stories; hollow tile and stucco; slate roof; hardwood floors.

Ark., Searcy.—J. M. Woodson will erect 4 cottages; frame; cost \$1000 each.

D. C., Washington.—A. C. Moses, The Burlington, will erect 5 dwellings at \$809-8817 5th St. N. W.; two stories; brick; cost \$15,000.

D. C., Washington.—Burr N. Edwards, 606 F St. N. W., has plans by John M. Doan, 1737 H St. N. W., Washington, for dwelling at Melrose St. and Connecticut Ave. N. W.; cost \$9000.

D. C., Washington.—Charles W. Steers, 1338 G St. N. W., will erect residence at 16th and Longfellow Sts. N. W.; cost \$5500.

D. C., Washington.—Central Presbyterian Church will erect parsonage adjacent to church at 15th and Irving Sts.; 8 rooms; Colonial architecture; rough texture brick; bids for construction being received by A. P. Clark, Jr., Archt., 816 14th St. N. W., Washington.

D. C., Washington.—H. G. Smithy, 4905 14th St. N. W., has plans by W. R. Talbott, 1314 F St. N. W., Washington, for dwelling in Saul's Addition; cost \$5500.

D. C., Washington.—Isaac T. Mann, 1333 16th St. N. W., will erect dwelling at 21st St. and Massachusetts Ave.; cost \$60,000.

D. C., Washington.—W. T. Lawrence, 704 M St. N. W., is having plans prepared by J. H. De Sibour, Hibbs Bldg., for a dwelling; cost \$25,000; W. P. Lipscomb, 1405 F St. N. W., Washington, will probably secure contract.

Fla., Jacksonville.—E. Barker will erect 2-story frame residence; cost \$2000.

Fla., Jacksonville.—W. I. Coleman will erect 1-story frame dwelling on Banana St.; cost \$3300.

Fla., Jacksonville.—Atlantic & Gulf Investment Co. will erect 4 second-story additions to frame dwellings on Ashley St.; cost \$4000.

Fla., Sarasota.—Mrs. Mary E. Lines is having plans prepared by H. N. Hall, Sarasota, for 2 dwellings.

Ga., Atlanta.—C. C. Hatcher will erect 2 brick veneer dwellings at 142 17th St. and 76 Inman circle; cost \$11,500; day labor.

Ga., Atlanta.—G. F. Turner will erect 2-story brick-veneer dwelling at 541 Ponce de Leon Ave.; cost \$4500; day labor.

Ga., Augusta.—W. M. O'Connell will erect \$3700 frame dwelling.

Ga., Lagrange.—Dr. W. E. Morgan will erect dwelling at Greenwood and Lewis Sts.

Ga., Rossville.—H. G. Dunn is reported to rebuild residence reported burned.

Ga., Rossville.—Jeff DeFreese is reported to rebuild residence reported burned.

Ga., Rossville.—Chas. Robinson is reported to rebuild residence reported burned.

Ga., Savannah.—Georgia Land & Security Co. is reported to erect six 2-story residences; frame.

Ga., Waresboro.—W. M. Miller of Greensburg, Ind., is reported to erect residence.

Md., Baltimore.—Jacob Castleberg, 2435 Eutaw Pl., is reported as probably to erect residence on portion of Cloverdale property.

Md., Baltimore.—Jno. P. Brandau, 700 E. North Ave., is having plans prepared by C. Brandau for 9 dwellings on N. Longwood Ave.; eight to be 2 stories and one 3 stories; ornamental brick; 14x55 ft.; cost \$15,000.

Md., Baltimore.—Herman Rossberg, 841 Frederick Ave., Ext., will erect cottage at Norwood Heights.

Md., Catonsville.—Arthur C. Montell, Cash. First National Bank of Catonsville, will erect bungalow on Frederick Rd. opposite Nunery La.; 40x50 ft.; slate roof; hot-water heat; Wm. A. Ehlers, Archt., Catonsville, Md.

Md., Govans.—Gallagher Realty Co., Hugh J. Gallagher, Pres., Notre Dame Ave. near York Rd., will erect 26 dwellings on Woodburne Ave.

Md., Mt. Washington.—Isaac S. George, 1009 Calvert Bldg., Baltimore, purchased lot 70x300 ft. and is considering erection of residence; plans not definite.

Md., Ruxton.—Raleigh C. Thomas, Baltimore Club, Baltimore, is having plans prepared by Parker, Thomas & Rice, Union Trust Bldg., Baltimore, for residence.

Miss., Belzoni.—W. L. Toney opens bids Mch. 3 to erect residence; 2 stories; 12

rooms; cost \$7000; asbestos or metal shingle roof; brick and stucco walls; hot-air heat; electric lighting; Alsop & Kaehnopp, Architects, West Point, Miss.; lately noted reported damaged by fire. (See Machinery Wanted.)

Mo., Kansas City.—G. M. Ellsworth will erect 2 dwellings on Houston St., to cost \$200 each; stucco veneer.

Mo., Kansas City.—J. E. Eldredge will erect 5 dwellings on Norton and Brighton Sts.; frame, stucco veneer and brick veneer; cost \$11,500.

Mo., Kansas City.—Wells Bros. will erect 7 frame dwellings at 4039-40-42-46 and 4003 Garfield St. and 4007-09 Michigan St.; cost \$17,500.

Mo., Kansas City.—D. C. Oberlin will erect stone veneer building at 140 Chelsea Ave.; cost \$1000.

Mo., Kansas City.—E. C. Haller, 5925 Brookside Blvd., will erect residence; 30x30 ft.; cost \$4500; ordinary construction; shingle roof; hot-air heat; electric lighting. (Lately noted.)

Mo., St. Louis.—Edward Junghaus will erect 8 bungalows at Miami and Oregon Aves.; cost about \$5000 each.

Mo., St. Louis.—C. W. Woodward will erect 2-story dwelling at 6024 Columbia St.; cost \$2000.

Mo., St. Louis.—G. F. Meyers will erect 2-story dwelling at 4064 Wyoming St.; cost \$2400.

Mo., St. Louis.—Edward C. Emde, 2232 Partridge St., will erect 2-story dwelling; cost \$2900.

Mo., St. Louis.—Mrs. Teresa Taylor will not erect dwelling on Westminster St., as lately reported.

N. C., Greenville.—B. J. Pully has plans by Bouton & Moore, Wilson, N. C., for dwelling; 45x60 ft.; cost \$5000.

N. C., Kinston.—H. Stadium is reported to erect residence on E. Gordon St.

N. C., Kinston.—C. Felix Harvey will erect residence on Vernon Heights; cost about \$2500; 12 or 14 rooms; Hook & Rogers, Architects, Charlotte; date of opening bids not set; plans not complete.

N. C., Lexington.—D. S. Siceoff, Chrmn. Board of County Commrs., is reported to erect \$5000 residence at State St. and 6th Ave.

N. C., Statesville.—C. H. Morrison is reported to erect 2 dwellings on Meeting St.

N. C., Wilmington.—Kure Land & Development Co., Hans A. Kure, Prest., will build number of cottages in connection with development of Fort Fisher Sea Beach. (See Land Developments.)

S. C., Aiken.—H. M. Dibble and others are interested in erection of number of bungalows with 50-room hotel. (See Hotels.)

S. C., Landrum.—H. M. Geer, Belton, S. C., is reported to erect cottage.

Tenn., Chattanooga.—Jo Anderson is erecting residence on Walden's Ridge; stone construction.

Tenn., Dickson.—G. W. Dodson will erect dwelling.

Tenn., Knoxville.—A. A. Fielding is reported to remodel residence.

Tenn., Knoxville.—B. M. Gaston is reported to erect residence.

Tenn., Knoxville.—Church of the Holy Ghost is reported having plans prepared by L. C. Waters, Knoxville, for rectory on Hinton Ave.; brick veneer; cost \$4000.

Tenn., Knoxville.—J. F. Ragsdale is reported to erect residence.

Tenn., Knoxville.—J. H. Anderson is reported to remodel residence on Circle Park.

Tenn., Nashville.—W. D. Phillips will erect residence at 209 23d Ave. north; 2 stories; slate roof; cost \$6500.

Tenn., Nashville.—John W. Thomas will not erect residence, as previously reported.

Tenn., Nashville.—W. A. Gillespie postponed erection of residence. (Previously noted as having plans prepared by Asmus & Norton, Nashville.)

Tex., Coleman.—A. J. Lewallen is reported to erect residence; 7 rooms; construction under supervision of L. G. Gibson, Coleman.

Tex., Cuero.—Dr. J. H. Reuss has plans by Keels & Kleuser, Austin, for residence; brick veneer; hot-air heat and vacuum-cleaning system; cost \$12,000.

Tex., Dallas.—S. Colburn will erect 12-room dwelling at 2625 S. Hardwood St.; frame; cost \$4000; and 16-room dwelling at 2623 S. Hardwood St.; 2 stories; frame; cost \$5300.

Tex., Dallas.—O. S. Thomas will erect dwelling at 2719 Oak Lawn St.; 8 rooms; frame; cost \$4500.

Tex., Dallas.—Mrs. J. P. Keehan will erect 9-room dwelling at 5026 Junius St.; 2 stories; frame; cost \$3500.

Tex., Dallas.—Earl E. Goodenow will erect 5-room frame cottage at 3717 Boser St.; cost \$3250.

Tex., Dallas.—A. L. Mitchell will erect residence at 5128 Reiger St.; 20 rooms; 2 stories; frame; cost \$6000.

Tex., Dallas.—C. J. Gaulding will erect residence at 315 S. Montclair St.; 6 rooms; 2 stories; frame; cost \$3000.

Tex., Houston.—Abbott Cockrell has plans by O. H. P. Rudisill & Son, 508½ Travis St., Houston, for residence; 2 stories; hollow tile; 46.10x56 ft.; Spanish clay tile roof; cost \$7000; bids opened Feb. 16.

Tex., Orange.—R. M. Harmon is reported as erecting dwelling and hotel.

Tex., San Antonio.—Ira Ogden will erect residence in Summit Place; 2 stories; brick; interior hardwood finish; steam heat; cost \$10,000; Ernest P. Behles, Archt.

Tex., San Antonio.—H. C. S. Smith is reported to erect residence on San Pedro Ave.; 2 stories; frame; cost \$8000; Adams & Adams, Architects, Gibbs Bldg., San Antonio.

Tex., San Antonio.—Henry Boerner has not let contract (as lately reported) to erect dwelling; 33x51 ft.; 2 stories and basement; cost \$7000; ordinary construction; asphalt shingle roof; hot-air heat; Leo M. J. Dielmann, Archt., San Antonio.

Tex., Texas City.—Carl Nessler will erect \$3500 residence.

Tex., Texas City.—Wm. A. Guillemet, 1910 Ave. K, Galveston, Tex., is preparing plans for 2-story frame residence. (See Machinery Wanted.)

Tex., Waco.—Church of Assumption is reported to erect parochial residence; cost \$10,000; H. B. Mistrot, Chrmn. of Building Comm.

Va., Berkeley, Station Norfolk.—W. W. Hall, Great Bridge (not a postoffice) will erect residence on Raleigh Heights.

Va., Graham.—J. T. Fry is reported to erect residence; brick; construction about Mch. 1.

Va., Norfolk.—Arthur M. Guy Co. will develop Bungalow City; erect about 100 bungalows on lots with 50-ft. frontage and cost \$3000 to \$6000 each. (See Land Developments.)

Va., Roanoke.—High Street Baptist Church, Rev. J. H. Burks, pastor, plans to rebuild burned parsonage. (See Churches.)

Va., Staunton.—Staunton Military Academy is reported to erect residences for professors. (See Schools.)

GOVERNMENT AND STATE

D. C., Washington.—Forest Service Building.—Dept. of Agriculture, Office of R. M. Reese, Ch. Clerk, has plans by MacNeil & MacNeil, Union Trust Bldg., Washington, for building for Forest Service at 13½ B St. S. W.

Ga., Cartersville.—Postoffice.—Treasury Department, Oscar Wenderoth, Supervising Archt., Washington, D. C. Bids until Mch. 31 to erect complete (including mechanical equipment, interior lighting fixtures and approaches) U. S. postoffice; one story and basement; ground area, 4075 sq. ft.; brick facing; slate roof; drawings and specifications obtainable from custodian at site, or at this office, at discretion of supervising archt.

Ga., Savannah.—Postoffice.—Marion Lucas, Custodian, withdrew work of painting and repairing postoffice from market, pending revision of specifications. (Lately noted as to receive bids until Feb. 12 for repairs and remodeling postoffice, including stone work, repainting walls, etc.)

N. C., Goldsboro.—Postoffice.—L. M. Michaux, custodian, receives bids until Mch. 16 to repair and paint postoffice building.

Tex., Carlsbad.—Sanatorium.—Texas Tuberculosis Com. Austin, is reported to erect several buildings and make other improvements at tuberculosis sanatorium.

Tex., San Angelo.—Postoffice.—Custodian of postoffice receives bids until Mch. 10 for interior and exterior painting at postoffice; information on application.

HOTELS

D. C., Washington.—W. D. Barry, 2024 14th St. N. W., has plans by N. R. Grimm, Bond Bldg., to remodel restaurant at 2008 14th St.; cost \$7500.

Fla., Kissimmee.—Graystone Hotel will erect addition to 290x54-ft. building under construction; 50 bedrooms and private dining-room; construction about May 1. (Company lately noted inceptd. \$300,000 capital, by Harry W. Thurman and others.)

Fla., Piney Point (not a postoffice).—John

W. Jackson, Prest. of Palmetto Board of Trade, Palmetto, Fla., is reported promoting company to develop Piney Point; plan includes erecting hotel, etc.

Fla., St. Petersburg.—John's Pass Realty Co. is reported to erect hotel on Boca Celga Bay.

Fla., West Palm Beach.—J. Godwin, Miami, Fla., will erect hotel and store building on Olive St.; 4 stories; 110 rooms in hotel portion, baths, telephones, etc.; concrete.

Ga., Ocala.—G. A. Thompson, Bullochville, Ga., is reported interested in erecting hotel.

Ga., Rome.—Broad Street Hotel Co. will erect hotel; 11x120 ft.; 5 stories; reinforced concrete; direct low-pressure steam heat; 2 elevators; cost \$97,500; A. Ten Eyck Brown, Archt., Atlanta; contractors estimating are: Miles & Bradt, Austell Bldg.; H. J. Carr & Co., Candler Bldg.; Geo. A. Clayton, Gould Bldg.; Griffin Construction Co., Candler Bldg.; Caudwell-Wingate Co., Candler Bldg.; Southern Ferro-Concrete Co., Equitable Bldg.; all of Atlanta; Ager & Cline, 27th and 1st Ave.; Carroll Blake Construction Co., American Trust Bldg., both of Birmingham, Ala.; T. S. Moody, Chamberlain Bldg., Chattanooga; King Lumber Co., Charlottesville, Va.; A. M. Walkup, American National Bank Bldg.; Wise Granite Co., both of Richmond, Va.; Little-Clecker Construction Co., Anniston, Ala.; J. F. Dupree & Son, Rome, Ga.; Ragland-Baxter-Morford Co., Nashville, Tenn. (Lately reported to open bids Feb. 20.)

Mo., St. Louis.—Hagerman-Fitzsimmons Realty Co., representing syndicate, is reported organizing holding company to erect hotel 18th and Locust Sts.; 7 stories; 225 rooms with bath; site 75x155 ft.; cost \$300,000.

S. C., Aiken.—H. M. Dibble, Prest. of Bank of Western Carolina, Real Estate & Fidelity Co. and others are interested in erection of 50-room hotel and number of bungalows; 25 baths.

Tex., Marshall.—C. G. Lancaster, Archt., Marshall, will receive bids until Feb. 23 for alterations to Capitol Hotel; bids received as follows: All brick work, plastering, iron work and carpenter's work, in one bid; steam heating, plumbing and gas piping, separate bid; painting, decorating, etc., separate bid; electric and telephone wiring, separate bid. Notice to bidders, proposal sheets, plans and specifications from the Archt.

Tex., Orange.—R. M. Harmon is reported as erecting hotel and dwelling.

W. Va., Welch.—Board of Trade is promoting organization of company to erect hotel; 125x125 ft.; 4 stories; cost \$100,000 to \$125,000; fireproof; construction probably in spring. Address L. C. Anderson, Welch. (Previously noted.)

MISCELLANEOUS

Ala., Gadsden.—Hospital.—A. W. Ralls will erect 20-room addition to hospital; brick veneer; tile roof; install hydro-therapeutic baths, electroliters, etc.

Ala., Jasper.—Hospital.—Dr. V. W. Williams and others are having plans prepared by Ben Price, 518 Empire Bldg., Birmingham, for 16-bed hospital; frame or brick veneer; fireproof; composition or metal roof; cost about \$10,000; day labor.

Ala., New Decatur.—Hospital.—Drs. Watson and Greer will rebuild burned hospital.

Ark., Argenta.—Hospital.—Missouri Pacific Iron Mountain Rys., Paul Vasterling, Chief Surgeon, St. Louis, will erect emergency hospital; plans by engineering department; \$5000 appropriation.

Ark., Helena.—Hospital.—Colored Hospital Assn. will erect hospital; cost (without mechanical equipment) \$6000; ordinary construction; archt. not selected.

D. C., Washington.—Stable.—Tolman Laundry, 491 C St., will erect stable and garage at John Marshall Pl.; 3 stories; cost \$25,000.

Fla., St. Petersburg.—Clubhouse.—John's Pass Realty Co. is reported to erect clubhouse for Country Club.

Ga., Rome.—Clubhouse.—Woman's Club, Mrs. J. Lindsay Johnson, Prest., will erect clubhouse.

La., New Orleans.—Convent.—Dominican Fathers are reported to erect convent school and church buildings. (See Schools.)

Mo., St. Louis.—Market.—St. Louis County Producers' Market Co., Clayton, Mo., opens bids within 30 days to erect market on Sarah St. between Laclede Ave. and West Pine Blvd.; 150 ft. front on Sarah St. and 150 ft. front on Laclede Ave.; cost (without mechanical equipment) \$30,000; brick walls; concrete floor; mill work interior; tar and gravel roof; high-pressure boiler; Oscar A. Doerman, Archt., 1005 Fullerton Bldg., St. Louis; address proposals to A. C. McKibbin,

4040 Arsenal St., St. Louis. (Lately described.)

Mo., St. Louis.—Grandstand.—Federal League Baseball Co. will erect grandstand at 200-S. Grand St.; cost \$32,000.

N. C., Durham.—Sanitarium.—Civic League is reported promoting erection of tuberculosis sanitarium; Mrs. A. Crumpacker is interested.

Tenn., Buntyn.—Clubhouse.—Country Club, S. T. Carnes, Prest., Memphis, is reported to expend \$6000 to \$10,000 for improvements to clubhouse; will remove stables and out-houses to rear of club building, provide arched entrances with improved automobile paths, erect waiting station with shed at street-car tracks, etc.

Tenn., Chattanooga.—Clubhouse.—Golf and Country Club Building Com. selected Chas. E. Bearden, Chattanooga, and W. T. Downing, Grant Bldg., Atlanta, Ga., architects for clubhouse to cost \$50,000. (Lately noted.)

Tex., San Antonio.—Clubhouse.—Jewish Harmony Club is reported to erect \$45,000 clubhouse; 2 stories and basement; reinforced concrete.

W. Va., Huntington.—Parish-house.—First M. E. Church will erect parish-house to contain gymnasium, etc.; one story. Address The Pastor.

RAILWAY STATIONS, SHEDS, ETC.

Ga., Tifton.—Georgia Southern & Florida Ry., W. C. Shaw, Chief Engr., Macon, Ga., and Atlantic Coast Line Ry., E. B. Pleasants, Chief Engr., Wilmington, N. C., are reported to expend \$4500 for additions and improvements to union passenger station.

Tex., Angleton.—Missouri, Kansas & Texas Ry. Co. of Texas, A. M. Acheson, Ch. Engr., Dallas, is reported to erect station.

Tex., Calverton.—Houston & Texas Central R. R., W. G. Van Vleck, Vice-Prest. and Gen. Mgr., Houston, is reported to erect passenger station.

Tex., Texarkana.—Texarkana & Fort Smith Ry., R. H. Gaines, Chief Engr., and other companies entering city are reported to probably erect union station.

Tex., West.—Southern Traction Co. will erect brick depot at Reagan and Oak Sts.

Va., Alleghany Station.—Chesapeake & Ohio Ry., F. I. Cabell, Ch. Engr., Richmond, Va., is reported to erect station to replace structure previously burned.

SCHOOLS

Ala., Double Springs.—Winston county is having plans prepared by Frank Lockwood, Montgomery, Ala., for high school; 6 rooms and auditorium; local stone; hot-air heat; tile shingle roof; cost \$10,000.

Ala., Lanett.—Lanett School Dist. voted \$12,000 bonds to erect school. Address Dist. School Commrs. (Lately noted.)

Ark., Arkadelphia.—Henderson-Brown College, G. W. Crowell, Prest., will erect administration building, boys' and girls' dormitories; cost (without mechanical equipment) \$150,000; fireproof construction; slate roof; Archt. not selected. (Lately noted.)

Ark., Monticello.—State Agricultural College will rebuild dining hall; cost (without mechanical equipment) \$15,000; fireproof; heating and lighting not decided; address proposals to E. B. Wells. (Lately reported damaged by fire.)

Fla., Coconut Grove.—Coconut Grove Special School Dist. votes Mch. 7 on \$15,000 bonds to erect addition to school and retire \$8000 bonds; R. E. Hall, Supt. of Public Instruction of Dade County, Miami, Fla. (Lately noted.)

Fla., Leesburg.—Sub Tax School Dist. voted \$35,000 bonds to erect and equip school; Wm. T. Kennedy, Supt. (Lately noted.)

Fla., Miami.—Miami School Dist. votes Mch. 9 on \$150,000 bonds for schools; erect high school to accommodate 400 to 500 pupils and 7 ward schools from 4 to 8 rooms each; fireproof; tile roof; electric wiring; cost (without mechanical equipment) \$100,000; date of opening bids not set; R. E. Hall, Box 458, Supt. of Public Instruction. (Lately noted.)

Fla., Plant City.—School Trustees have plans by Willis R. Biggers, Tampa, Fla., for high school on site of 4 acres; 3 stories; dark brick with light brick trimmings; red clay tile roof; shower baths, gymnasium, etc.; auditorium on first floor, 54x90 ft., with balcony; colonnade entrance; interior finish of mission stained pine, wooden ceilings; second floor will have 9 classrooms and lecture hall 30x54 ft., with stage; cost \$40,000. (Previously noted having voted \$40,000 bonds.)

Fla., Tampa.—Board of Public Instruction, Wm. Schneider, Chmn., voted \$13,000 bonds to erect school. (Lately noted.)

Ga., Athens.—City will expend about \$25,000 to remodel courthouse for school; erect 8 additional rooms; J. W. Bennett, City Engr., will probably supervise construction; plans not made. (City lately noted as purchasing county courthouse for this purpose.)

Ga., Columbus.—School Board will, it is reported, erect building at North Highlands.

Ga., Tifton.—City will vote Feb. 25 on \$12,000 bonds to erect additions to schools. Address The Mayor.

Ga., Whigham.—Whigham School Dist. votes Feb. 28 on \$8000 bonds to erect school; \$4x96 ft.; ordinary construction; composition roof; cost of heating plant, \$1200 to \$1500; C. E. Choats, Archt., Atlanta; bids opened in about 60 days. Address proposals to T. J. Mills. (Lately noted.)

Ky., Fort Thomas.—Board of Education, it is reported, will soon receive bids to erect school; 2 stories and basement; 121x154 ft.; cost about \$40,000; Weber, Warner & Adkins, Archt., Mercantile Library Bldg., Cincinnati, O.

La., Oakdale.—Oakdale High School Dist. voted tax to secure issue \$25,000 bonds to supplement \$15,000 already voted for brick high school.

La., Vivian.—City votes Feb. 17 on \$70,000 bonds to erect school; 100x172 ft.; fireproof; tile roof; steam heat; cost (without mechanical equipment) \$60,000. (Lately noted.)

Md., Frederick.—Hood College will expend \$60,000 (cost without mechanical equipment) to erect administration building and classrooms; 42x155 ft.; fireproof and ordinary construction; Peach bottom slate roof; direct steam heat; electric lighting; hand-power freight elevator; John B. Hamme, Archt., York, Pa.; contractors estimating are: King Lumber Co., Charlottesville, Va.; Lloyd C. Culler, Frederick, Md.; O. H. Hostetter, Hanover, Pa.; Eline Bros., Littleton, Pa.; J. L. Menough & Son, York, Pa.; Milton T. Ochs, Allentown, Pa.; W. D. Steinbach's Sons, Lewistown, Pa.; Benj. F. Bennett Building Co., 123 S. Howard St., Baltimore, Md.; Fulton-Albert Corp., 303 5th Ave., New York; John Thatcher & Son, 60 Park Ave., Brooklyn; Barry-Goodwin Co., 1078 Drexel Bldg., Philadelphia; Jos. P. Brennan Building Co., Lancaster, Pa. (Lately noted to receive bids until Feb. 16.)

Miss., Jackson.—Millsaps College will erect administration building; cost \$40,000; address proposals to R. W. Millsaps. (Lately noted.)

Miss., Meridian.—School Board is reported considering bond issue for school improvements estimated to cost \$75,000.

Miss., Sumrall.—City will expend \$20,000 (without mechanical equipment) to erect high school; 50x125 ft.; ordinary construction; tar and gravel roof; steam heat; Overstreet, Spencer & Paine, Archts.; plans ready by Feb. 25. (Previously noted.)

Mo., Cape Girardeau.—Geo. W. Walker, Secy. Board of Education, is having plans prepared by J. H. Felt & Co., Kansas City, Mo., for central school and addition to another school; cost \$85,000.

Mo., Chillicothe.—City is reported contemplating issuing \$30,000 bonds for schools. Address the Mayor.

Mo., Columbia.—Trustees of University of Missouri will, it is reported, erect stone building and outbuildings for hog cholera serum plant of veterinary science department; has \$50,000 appropriation.

Mo., La Plata.—School Dist. will vote on \$20,000 high-school bonds. Address Dist. School Commrs.

Mo., Kansas City.—Directors of Kansas City School Dist. receive bids at office of Jas. B. Jackson, Jr., Public Library Bldg., until Feb. 21 for material and erecting Gladstone school building on Lakota Ave.; 9 rooms, gymnasium and assembly hall; plans and specifications at office of Chas. A. Smith, Archt., 602 Finance Bldg., Kansas City. (Previously noted.)

Mo., Mound City.—City is reported having plans prepared by Trunk & Gordon, Donnell Court, Mound City, for 2-story-and-basement high and grade school; 83x157 ft.; cost \$43,000.

N. C., Broadway.—City is reported to vote March 17 on bonds to erect \$3000 school. Address The Mayor.

N. C., Charlotte.—J. C. Horner of Horner Military Academy opened bids to erect dormitory; J. A. Gardner, Charlotte, is lowest bidder. (Lately noted.)

N. C., Greensboro.—City will erect school; cost \$7000 to \$8000. Address The Mayor.

N. C., Kinston.—Trustees of Kinston

Graded School receive bids until Feb. 9 to erect 2-story-and-basement brick school; plans and specifications at office of P. S. B. Harper, Secy. of Board of Trustees, and Frank K. Thompson, Archt., Raleigh, call for structure 120x124 ft.; accommodations for 650; cost \$35,000 to \$40,000. (Lately noted.)

N. C., Wilson.—City, Chas. L. Coon, Supt. of Schools, has plans by Benton & Moore, Wilson, for building; 50x100 ft.; cost \$25,000. (Lately noted.)

Okla., Henryetta.—City voted \$25,000 bonds to erect school. Address The Mayor.

Tenn., Columbia.—City will vote on bonds to erect high school to cost \$50,000; archt. not selected. Address The Mayor. (Lately noted.)

Tenn., Knoxville.—Knox county contemplates voting on \$150,000 to \$200,000 school bonds. Address County Commrs.

Tenn., Portland.—Sumner county will erect high school; cost \$10,000. Address County School Board, Gallatin, Tenn.

Tenn., Pulaski.—Town will vote Feb. 21 on \$12,500 bonds to erect and equip addition to school; H. F. Wheeler, Mayor.

Tex., Big Wells.—City voted \$20,000 bonds to erect school. Address The Mayor.

Tex., Bronson.—Bronson Independent School Dist. voted \$12,000 bonds to erect 2-story brick school. Address Dist. School Trustees.

Tex., Gatesville.—Gatesville Training School for Juveniles opens bids about Apr. 1 to erect dormitory; 80x94 ft.; 2 stories; cost \$40,000; fireproof construction; steam heat; electric lighting; Roy E. Lane, Archt., Waco, Tex. (Lately noted.)

Tex., Grand Prairie.—Trustees of Grand Prairie Independent School Dist. receive bids until Feb. 23 to erect 8-room, 2-story addition to and alter school building; plans and specifications at office of H. A. Overbeck, Archt., 501-04 Junata Bldg., Dallas; bids addressed to J. T. Smith, Secy. School Board, Grand Prairie.

Tex., Lamarque.—Lamarque Common School Dist. Trustees have plans by Lane & Dowdy, Stewart Bldg., Houston, for school; 3 rooms and auditorium 45x60 ft.; reinforced concrete basement; brick and hollow tile construction; cost \$7000. (Previously noted.)

Tex., La Porte.—J. W. Kirwin opens bids Feb. 25 to erect gymnasium for St. Mary's Seminary; 100x40 ft.; cost (without mechanical equipment) \$10,000; ordinary brick construction; M. J. Smith, Archt., Galveston, Tex. (See Machinery Wanted.)

Tex., Yoakum.—City will vote Feb. 18 on \$30,000 bonds for additional schools. Address The Mayor.

Va., Rodman Heights (not a postoffice).—Western Branch Dist. School Board of Norfolk county, A. H. Foreman, Dir. Supt., Portsmouth, receives bids until Feb. 25 to erect 2-story 4-room brick school in Rodman Heights; plans and specifications at office of Lee & Diehl, Archts., 408 Seaboard Bank Bldg., Norfolk.

W. Va., Moorefield.—Moorefield School Dist. opens bids Feb. 9 to erect school; 80x55 ft.; cost \$20,000; ordinary construction; brick exterior; composition roof; mechanical heating plant; electric lighting; metal windows; Holmboe & Laferty, Archts., Clarksburg, W. Va. Address proposals to W. W. Gamble, Secy. of Board of Education. (Lately noted.)

STORES

Ala., Birmingham.—Birmingham Realty Co., I. Croom Bentley, Gen. Mgr., is reported to erect building to be occupied by Tyler Grocery Co.; 100x185 ft.; 4 stories; cost \$50,000.

Ala., Birmingham.—Mackin Bros. will erect 4 stores; one story; brick; plate glass; steam heat; composition roof; cost about \$8000; plans being prepared by J. G. Ringer, 10 Steiner Bldg., Birmingham; will be ready in 10 days.

Ala., Birmingham.—J. W. Cooke of Maben, Miss., will erect store building on 3d Ave.; 4 stories; cost \$35,000.

Ala., Birmingham.—W. E. Bates will erect 2-story brick veneer building on 14th Ave. between 16th and 17th Sts.; cost \$2500.

Ala., Dothan.—J. R. Young has plans by C. Frank Galliher, 425 Bell Bldg., Montgomery, Ala., for store building; 2 stories; 29x60 ft.; white enamel brick; white glazed terracotta; Georgia marble; first floor of reinforced concrete; tile floor; copper marquise; accordion doors; offices on second floor.

Ala., Red Bay.—Tiffin Hardware & Furniture Co. will rebuild store reported burned 50x100 ft.; tin roof; cost \$4000; construction by May 1.

Ark., Searcy.—G. B. Greer will erect 1-story brick store building; cost \$3000; T. E. Henderson, superintendent of construction.

Fla., West Palm Beach.—J. Godwin, Miami, Fla., will erect store and hotel building on Olive St. (See Hotels.)

Ga., Atlanta.—T. W. Hudson is reported to erect 2-story brick-veneer dwelling on Penn Ave.; cost \$10,000; day labor.

Ga., Dalton.—C. M. Felker will erect store; 25-ft. plate-glass front; brick.

Ga., Rossville.—H. G. Dunn is reported to rebuild residence and store building reported burned.

Mo., Kansas City.—H. Denewitz will erect store and apartment building at 2210 Vine St.; brick and stone; cost \$3500.

Mo., St. Louis.—Arthur Hess will erect store and apartment-house. (See Apartment-houses.)

Mo., St. Louis.—Regal Realty & Investment Co. will erect store and apartment-house. (See Apartment-houses.)

Mo., St. Louis.—J. G. Brandt, Jr., is reported to reconstruct 4-story building at 9th St. and Franklin Ave.; cost about \$6000.

N. C., Burlington.—Jos. A. Isley will erect building on Front St.; 4 stories and basement; 90x100 ft.; white Hy-texaface brick; 2 lower floors for stores; upper floors for offices.

N. C., Fayetteville.—C. L. Cooper has plans by Benton & Moore, Wilson, N. C., for business building; 74x82 ft.; ordinary construction; cost \$12,000.

N. C., High Point.—E. D. Steele and T. F. Wrenn, it is reported, will erect building on East Broad St.

N. C., Kinston.—L. and W. T. Hines will erect business building on Queen St.

N. C., Kinston.—H. C. Hines will erect store on Heritage St.; 100x105 ft.; 2 stories and basement; ordinary construction; probably tin roof; cost \$10,000 to \$12,000; C. E. Hartge, Archt., Raleigh, N. C.; probably open bids in 3 or 4 months.

Okla., Glencoe.—A. F. Hoge will rebuild store; stone; gravel roof; cost (without mechanical equipment) \$8000. (Lately reported damaged by fire.)

Okla., Oklahoma City.—S. H. Kress Co. will erect building at 218-22 W. Main St.; 2 stories and basement; reinforced concrete; 75x140 ft.; Bailey & Bailey, Archts., 701 Lawrence Bldg., Oklahoma City. (Previously noted.)

Okla., Tulsa.—Wm. J. Trimble is reported to erect building at 3d and Boulder Sts.; 3 stories; brick; 71x91 ft.; lower floor for stores; upper floor, offices.

Tenn., Knoxville.—L. D. Tyson is reported to erect business building.

Tenn., Morristown.—Mims-Goodson Co. will erect store at Main St.; six stories; brick and stone; electric elevators; sprinkler system, etc.

Tenn., Sweetwater.—Scruggs estate is reported to erect stores and offices to cost \$16,000 to \$20,000.

Tex., Houston.—J. E. McAshan will erect store and apartment-house. (See Apartment-houses.)

Tex., Livingston.—Texas Polk Co. will erect 2-story brick building for Livingston Drug Co.; 22½x64½ ft.; pressed brick; cost \$5000; plans being prepared; bids opened Feb. 20.

Tex., San Antonio.—E. H. Terrell, trustee, is reported to erect \$20,000 for alterations and additions to store building on E. Commerce St.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

Fla., Jacksonville.—Neal Finkelstein, 601 W. Bay St., let contract to erect apartment and store building. (See Stores.)

Md., Baltimore.—Boulevard Apartment Co. let contract to J. Henry Smith, 1436 Light St., Baltimore, to erect apartment-house on N. Charles and 32d Sts.; ornamental brick and limestone; 3 stories; plans by Clyde N. Friz, 1523 Munsey Bldg., Baltimore.

Mo., St. Louis.—E. J. Hunt let contract to E. H. Schuette to erect 2-story tenement-house at 5973 Highland Ave.; cost \$6500; A. F. Buder, Archt., St. Louis.

Mo., St. Louis.—H. M. Edmunds let contract to erect store and tenement-house. (See Stores.)

Mo., St. Louis.—H. L. Quest, 4219 College Ave., will expend \$4000 each to erect 2 tenement-houses at 4219 Kossuth Ave.; 24x50 ft.; ordinary construction; gravel roof; hot-

Tex., San Antonio.—David A. Oppenheimer will expend \$25,000 for 4-story addition and alterations to building on W. Commerce St.

Tex., Waco.—John F. Rowe, Waco, and Dr. J. R. Knight of Eddy, Tex., are reported to erect brick building.

W. Va., Clarksburg.—E. P. Frost, Huntington, W. Va., is reported to erect 4-story business block; brick; site 20x30 ft.

W. Va., Martinsburg.—Louis E. Gerling estate is reported to erect store and apartment building to replace burned structure; 3 stories; cost \$7500.

THEATERS

Fla., Jacksonville.—Southern Investment & Amusement Co., capital \$250,000, incorporated; S. A. Lynch, Pres., Asheville, N. C.; A. J. Sherrer, V.-P., Philadelphia, Pa.; D. J. Prince, Secy.; Jno. T. Alsop, Treas., both of Jacksonville; is reported to erect theater to cost \$30,000 to \$40,000.

Md., Hagerstown.—Fred C. Wright & Co. have plans by H. E. Yessler, Hagerstown, for theater; 41x240 ft.; ordinary construction; gravel roof; steam heat; electric lighting; ornamental iron and stucco interior and exterior work; lately noted. (See Machinery Wanted.)

Tex., Fort Worth.—T. P. Finnegan, 1209 Elm St., and others have plans by Lang & Wittell, Dallas, for theater and office building; 10 stories; cost (without mechanical equipment) \$200,000; fireproof construction; concrete slab roof; heating, lighting and other details not determined. (Lately noted.)

Va., Norfolk.—J. W. Winn is reported having prepared plans for theater on Church St. near Nicholson St.; seating capacity 1000; cost \$50,000. (Manhattan Amusement Corp. lately noted to erect theater on Church St.)

WAREHOUSES

Ala., Birmingham.—Farmers & Ginn's Cottonseed Oil Co., J. H. McCain, Secy.-Treas., is reported to rebuild seedhouse reported burned; loss \$90,000; steel and concrete; fireproof.

Ark., Searcy.—Merchants' Wholesale Grocery Co. will erect 50x100-ft. brick warehouse.

Fla., Tampa.—Tampa Gas Co. is reported to erect warehouse and supply shops.

N. C., Walnut Cove.—Walnut Cove Warehouse Co. selected C. M. Jones, J. M. Taylor and J. C. Hutchinson, Bldg. Comm., to purchase site and erect tobacco warehouse; wood; 50x200 ft. (Piedmont Warehouse Co. lately noted to erect warehouse to be managed by Hutchinson & Taylor.)

S. C., Cheraw.—Cheraw Warehouse Co., capital stock \$8000, organized by R. T. Caston, A. G. Melick-John, E. W. Duvall and others to erect tobacco warehouse; brick; 75x125 ft.

Tenn., Memphis.—A. L. Pritchard of Pritchard Bros. Co. is reported to erect building on Lauderdale St. to be occupied by offices, warehouses and manufacturing departments of Electric Supply Co. of 132 S. 2d St.; 3 stories; reinforced concrete; cost \$35,000; Harker Cairns, Archt., Memphis.

Va., Richmond.—Kings & Co., Indianapolis, Ind., contemplates extension to building.

Tex., Dallas.—R. W. Higginbotham has plans by Lang & Wittell, Dallas, for warehouse. Archts. wire Manufacturers Record: "Building for Higginbotham-Bailey-Logan Co. will be 7 stories and basement; 75x200 ft.; reinforced concrete; bids in Feb. 22." Reported cost, \$100,000.

water heat to cost \$450 each; electric lighting; plans and construction by owner; all subcontracts let. (Lately noted.)

Tenn., Memphis.—C. C. Medley, 723 Peabody Ave., will expend \$19,000 to erect tenement-house; 24 rooms; ordinary construction; gravel roof; hot-water heat to cost \$1400; electric lighting to cost \$850; Mahan & Broadwell, Archts., Germania Bank Bldg., Memphis; subcontract let to York Lumber Co.; general contract (lately noted) let to J. W. Crawford, 1455 Cowet St., Memphis.

Tex., El Paso.—Mollie S. Sarden, 809 N. Kansas Ave., has plans by and let contract to Mayfield Bldg. & Invest. Co., El Paso, to erect apartment-house; 2 stories; 3-family apartment; cost \$8000; ordinary construction; Rex tile roof; hot-air furnace to cost \$200. (Mayfield Bldg. & Invest. Co. lately noted to erect building.)

Va., Norfolk.—E. C. Wetzel let contract to John W. Saunders to erect 2-story brick

apartment-house on Llewellyn Ave.; cost \$1400.

Va., Richmond.—W. F. Drinkard, 1715 Hancock Ave., has plans by and let contract to R. T. Sunday & Co., Richmond, to erect apartment-house; 44x75 ft.; 27 ft. high; cost \$10,000; mill construction; tin and tile roof; hot-water heat to cost \$950; electric lighting to cost \$250. (Lately noted.)

W. Va., Huntington.—M. Broh will expend \$10,000 to erect apartment and store building; lately noted. (See Stores.)

W. Va., Keystone.—Wm. Banks let contract to Carter-Bird Construction Co., Bluefield and Keystone, W. Va., to erect 6 two-story six-room tenement-houses; cost \$3000 each; mill construction; metal shingle roof; electric lighting to cost \$60; Martin Gery, Archt., Bluefield. (Lately noted under Dwellings.)

ASSOCIATION AND FRATERNAL

Miss., Greenville.—Lodge No. 206, A. F. & A. Masons, let contract to Smith & Bobbitt, Memphis, Tenn., to erect lodge building; 60x75 ft.; cost \$16,000; ordinary construction; asbestos roof; steam heat; L. M. Weathers Co., Memphis, Tenn. (Lately noted.)

Miss., Starkville.—Y. M. C. A. of Agricultural and Mechanical College let contract to erect Y. M. C. A. Bldg. (See Schools.)

Va., Bedford City.—P. J. Moran, Salt Lake City, Utah, is reported to sublet contracts for construction of B. P. O. E. home, for which he has general contract. (See Buildings Proposed, Association and Fraternal.)

BANK AND OFFICE

Ala., Andalusia.—C. Frank Galliber, Archt., 425 Bell Bldg., Montgomery, Ala., is reported to have let contract to erect store and office building. (See Stores.)

Ala., Castleberry.—People's Bank is reported to have let contract to J. P. Baggett, Castleberry, to erect bank building; brick; tar and gravel roof; tile; marble banking fixtures; brick manufactured by Jenkins Brick Co., Montgomery, Ala., will be used for facing.

Ga., Augusta.—Empire Bldg. Co. let heating, plumbing and ventilating contract to E. J. Erbeling, Augusta, for 17-story fireproof office building lately noted; cost \$425,000; contract for electrical work let to Whitney-Eve Co., Augusta; Whitney Co. of New York (lately noted), Gen'l Contr.; W. L. Stoddart, 30 W. 38th St., New York, and G. Lloyd Preacher, Asso. Archts., Augusta. (See Machinery Wanted.)

Ga., Savannah.—Wage Earners' Loan and Invest. Co. let contract to R. E. Pharrow, Atlanta, Ga., to erect bank and office building; 4 stories; 50x60 ft.; 4 stories; cost (without mechanical equipment) \$31,000; ordinary construction; gravel roof; steam heat; electric lighting; pressed brick facing; Oolthie limestone trimmings; hard wall plaster; marble and tile interior walls and floors; Percy Snyder, Archt., Savannah. (Lately noted.)

Okla., Bartlesville.—Sutton & Keeler Co. let contract to McGregor & Hingle, Bartlesville, to erect bank and office building; 50x10 ft.; 6 stories; cost (without mechanical equipment) \$90,000; fireproof construction; combination roofing; steam heat; elevator; Chas. H. Delterling, Archt., St. Louis. (Previously noted.)

Okla., Pawhuska.—Trinagle Bldg. Co. let contract to Clements, Lowery & Graybill, Bartlesville and Pawhuska, Okla., to erect office and store building; 62x119 ft.; pitch and gravel roof; low-pressure direct steam heat; J. O. Parr, Archt., Oklahoma City, Okla. (Previously noted.)

Tex., Athens.—Dr. T. M. Matthews let contract to erect store and office building. (See Stores.)

Tex., Gause.—D. T. Votaw, Livingston, Tex., has contract to erect bank building. (See Stores.)

Tex., Houston.—Texas Co., T. G. Donoghue, acting V.-P., let contract to George A. Fuller Co., Chicago, to erect office building; 12 stories; steel frame; stone or brick; 102x132 ft.; cost about \$750,000; architect not selected. (Lately noted.)

Va., Kenbridge.—Dr. T. C. Harris let contract to erect office building and emergency hospital. (See Miscellaneous.)

Va., Norfolk.—E. L. Graves, Inc., let contract to E. L. Myers to erect office building on Tazewell St.; 2 stories; brick; cost \$6000.

CHURCHES

D. C., Washington.—Church of The Covenant let contract to Boyle-Robertson Co., 1576 H St. N. W., Washington, for repairs to church building; cost \$19,000; plans by Edw.

C. Dean, Union Trust Bldg., Washington. (Lately noted.)

Fla., Bowling Green.—Seventh Day Adventist Church let contract to J. F. Troglen, Bowling Green, to erect building; seating capacity, 125.

S. C., Edgefield.—Baptist Church, Rev. M. D. Jefferies, pastor, let contract to Mitchell Cox Lumber Co. to erect building; 50x125 ft.; cost (without mechanical equipment) \$15,000; ordinary construction; tin roof; mechanical warm-air heat; indirect electric lighting; Sayre & Baldwin, Archts., Anderson, S. C.; subcontracts let as follows: Elchberg Heating Co., Atlanta, Ga., for heating plant; Empire Glass Co., Atlanta, Ga., glass; Southern Seating & Cabinet Co., Jackson, Tenn., seats. (Previously noted.)

Tenn., Alexandria.—Baptist Church let contract to J. R. Bell, Alexandria, to erect building to replace burned structure; brick; 51x70 ft.; cost (without mechanical equipment) \$8000; galvanized shingle roof; steam heat to cost \$190; acetylene lighting to cost \$125. (See Machinery Wanted.)

Tex., Abilene.—First Presbyterian Church let contract to J. B. Fagan to repair church building and erect manse. (See Dwellings.)

Tex., Kerrville.—First Baptist Church, Rev. D. P. Althart, pastor, let contract to Clemens & Abel, San Antonio, to erect building; 52x78 ft.; cost (without mechanical equipment) \$11,500; fireproof; shingle roof; electric lighting; concrete sidewalks; Henry T. Phelps, Archt. (Lately noted.)

Tex., Santa Anna.—Methodist church, Rev. J. B. Curry, pastor, let contract to W. P. Gray, Santa Anna, to erect building; 80 ft. 8 in. by 54 ft. 8 in.; cost (without mechanical equipment) \$10,000; ordinary construction; cypress shingle and composition roof; heating not decided; electric lighting to cost \$150; Roy E. Lane, Archt., Santa Anna. (Lately noted.)

CITY AND COUNTY

Ala., Huntsville.—City Hall.—City let contract at \$5700 to Baxter Bros., Huntsville, to erect city hall, and at \$1250 to W. T. Hutchens Plumbing Co. for plumbing; Edgar B. Love, Archt., Birmingham. (Lately noted.)

D. C., Washington.—Hospital.—Dist. Commissioners let contract to Wells Bros. Co., Riggs Bldg., Washington, to erect emergency hospital previously noted; fireproof; felt roof with tile surface; steam heat; electric lighting; electric elevator; Nathan C. Wyeth, Archt., 1517 H St., Washington; proposals for mechanical equipment may be addressed to Mechlin & Starr, Wilkins Bldg., Washington; previously noted. (See Machinery Wanted.)

Va., Portsmouth.—Clerk's Office.—Norfolk County Supvs. let contract at \$5735 to J. H. Pierce, Norfolk, to erect annex to County Clerk's office; Lee & Diehl, Archts., Seaboard Bank Bldg., Norfolk. (Lately noted.)

W. Va., Wayne.—Infirmary.—Wayne County Commrs. let contract for stone work for infirmary to Jas. S. Lambert, R. F. D. No. 1, Ceredo, W. Va., at \$2200; 50x90 ft.; 2 stories; cost (without mechanical equipment) \$15,000; ordinary construction; slate or tile roof; hot-water heat; gas lighting; John R. Gleske, Archt., Ceredo, W. Va. (Previously noted.)

COURTHOUSES

Ark., Heber Springs.—Cleburne County Commrs. let contract to A. M. Byrnes, Fayetteville, Ark., to erect courthouse; 61x90 ft.; Clyde A. Ferrell, Archt., 210½ Louisiana St., Little Rock. (Lately noted.)

Ky., Paducah.—McCracken County Commrs. let contract to John Merett, Paducah, to remodel courthouse; cost \$10,000 to \$15,000; ordinary construction; metal roof; J. M. Rouse, Archt., Paducah. (Lately noted.)

Tex., Dallas.—Dallas County Commrs. let contract to Brick Selling Co., Birmingham, Ala., for face brick for courthouse. (Contracts lately noted awarded for plumbing, heating, etc.)

DWELLINGS

Ala., Bay Minette.—R. D. McPhaul is reported to have let contract to erect residence; cost \$5000.

Ala., Birmingham.—Mrs. C. F. Bidgood let contract to J. J. Holmes & Co., Birmingham, to erect 2-story frame residence; cost \$3500. (Lately noted.)

Ala., Montgomery.—W. Nash Read let contract to Stuart-Monk Contracting Co., Montgomery, to erect addition to residence; frame; cost \$5000; Frank Lockwood, Archt., Montgomery.

Ala., Troy.—Mrs. Addie Nichols let contract to W. W. Vaughn, Troy, to erect 6-room bungalow.

D. C., Washington.—A. F. Stevens, 2023 G St. N. W., let contract to Conrad M. Chaney, 628 8th St. N. E., Washington, to erect one two-story frame dwelling at 1806 Jackson St. N. E.; cost \$3800; M. Vaughn, Archt., Woodridge, Washington.

D. C., Washington.—J. A. Griesbauer, Chevy Chase, Md., let contract to A. C. Warthen to erect residence on Brookville Rd.; cost \$6000; plans by G. P. Hales, 1406 G St. N. W., Washington.

D. C., Washington.—J. B. Moorey will erect frame residence at 3625 Albemarle St. N. W.; frame; cost \$4000; E. D. Ryerson, 3759 Northampton St. N. W., Archt.; A. Warthen contractor.

D. C., Washington.—W. Preston has plans by Hunter & Bell, 1421 H St. N. W., Washington, to erect 5 2-story brick dwellings at 17-25 Columbia Rd.; cost \$12,500.

D. C., Washington.—J. A. Griesbauer let contract to A. C. Warthen to erect residence on Brookville Rd.; cost \$6000; Geo. P. Hales, Archt., 1406 G St. N. W., Washington.

Fla., Kissimmee.—A. Van der Meerach has plans by and let contract to J. C. Ledbetter to erect residence on Clyde Ave.; cost \$7000; ordinary construction; shingle roof; fireplaces; lighting to cost \$500; cement sidewalks.

Ga., Albany.—J. E. LeGreve let contract to R. S. Smith, Albany, to erect residence; 2 stories; cost about \$4000.

Ga., Atlanta.—Polk Archer let contract to A. D. Hamilton, Atlanta, to erect residence; cost \$3500.

Ga., Atlanta.—Williams-Hartsock Co. let contract to C. E. Miller, Atlanta, to erect residence; cost \$3750.

Ga., Atlanta.—W. B. Phelps let contract to C. E. Miller, Atlanta, to erect residence; cost \$5000.

Ga., Atlanta.—Annie L. Pritchett let contract to Fulton County Home Builders to erect dwelling 233 N. Moreland St.; frame; cost \$4500.

Ga., Atlanta.—Eugene Ragland let contract to Fulton County Home Builders to erect frame dwelling at 990 E. North Ave.; cost \$5500.

Ga., Lagrange.—S. H. Dunson will erect bungalow; Chas. W. Carlton, Archt., General Engineering & Construction Co., Contr., Lagrange.

La., New Orleans.—Dr. Jos. Conn, 3339 St. Charles Ave., let contract to Chas. Garey, Perrin Bldg., New Orleans, to erect store and dwelling; 26x60 ft.; 2 stories; cost (without mechanical equipment) \$5000; ordinary construction; slate roof; Moise Goldstein, Archt., Perrin Bldg., New Orleans. (Lately noted.)

Md., Baltimore.—Misses Helen and Lydia McIntosh let contract to Edw. G. Turner, Bateman Ave., for residence at Guilford; 2½ stories; brick; Mottu & White, Archts., 322 N. Charles St., Baltimore.

Md., Baltimore.—Jas. McEvoy let contract to Wm. E. Haru Co., Inc., 213 N. Calvert St., Baltimore, to erect dwelling; 36x54 ft.; ordinary construction; slate roof; Thos. Bond Owings, 347 N. Charles St., Baltimore.

Md., Baltimore.—Duplex Cottage Co., 45 Gunther Bldg., has plans by and let contract to Geo. R. Morris, 45 Gunther Bldg., Baltimore, to erect 7 dwellings on Fairview Ave.; 30x33 ft.; frame; slate roof; steam heat; gas and electric lighting. (Lately noted to cost \$28,000.)

Mo., St. Louis.—H. Herman let contract to erect store and dwelling. (See Stores.)

Mo., St. Louis.—Hackman Real Estate Co. let contract to A. J. Gamache to erect 4 one-story dwellings 3118-21 N. 22d St.; cost \$8000; C. Breitschub, Archt.

Mo., St. Louis.—Nathaniel Pieper let contract to erect store and dwelling. (See Stores.)

Mo., St. Louis.—G. F. Meyer let contract to J. A. Sands to erect dwelling; 2 stories; brick; cost \$3000.

Mo., St. Louis.—Wm. Heper, 3964 St. Louis Ave., let contract to J. H. Williamson to erect dwelling on De Giverville Ave.; cost \$4500; 25x35 ft.; composition roof; steam heat. (Lately noted.)

Mo., St. Louis.—Lissetta Real Estate Co. will erect 6 dwellings at 3500-4-10 and 3501-7-11 Kingsland Court; 2 stories; 7 rooms; Dutch dining-rooms; hardwood floors; tile baths; hot-water heat; brick and stone porches; slate roofs; cost about \$40,000; Emil Hartmann, Contr., St. Louis.

Mo., University, Sta. St. Louis.—Miss N. Flynn let contract to Edw. Reumers, 2658 Wyoming St., St. Louis, to erect dwelling; 30x32 ft.; cost \$5000; ordinary construction; slate roof; hot-water heat; electric lighting;

L. Haeger, Archt., Utah Place, St. Louis. (Lately noted under Stores.)

N. C., Biltmore.—Chas. A. Hoitt let contract to Merchant & Boyles Asheville, N. C., to erect bungalow house, barn and garage; cost \$12,800.

N. C., Southern Pines.—Mrs. Woodward let contract to Thos. S. Burgess, Southern Pines, to erect residence; 31x36 ft.; cost \$3000; mill construction; cedar shingle roof; no heating plant. (See Machinery Wanted.)

Tenn., Covington.—W. A. Owen let contract to R. B. Shelton, Covington, to erect dwelling on Garland Ave.; 2 stories; 14 or 16 rooms; cost \$6000; mill construction; cost of heating plant, \$1000; lighting \$300. (Lately reported burned.)

Tenn., Knoxville.—Church of the Immaculate Conception let contract to Brimer & England Bros., Knoxville, to erect parochial residence; ordinary construction; slate roof; steam heat; L. C. Waters, Archt., 613 Market St., Knoxville.

Tenn., Memphis.—F. C. Storey will erect residence for R. E. Ellis, 33 S. Auburndale St.; cost \$5000.

Tenn., Memphis.—H. L. Gatchel let contract to R. A. Harris & Son to erect residence at 1829 Cowden Ave.; cost \$4000.

Tenn., Memphis.—W. A. Bickford & Co. will expend \$1750 each to erect three 5-room bungalows on Cedar Ave.; ordinary construction; shingle roof; fireplaces; electric lighting; granolithic sidewalks; contract lately noted let to Southern Improvement Co., 3d and Court Sts., Memphis.

Tenn., Memphis.—W. B. Alsop, 1663 Carothers Ave., let contract to Jos. Harrison, Memphis, to erect residence; 42x42 ft.; 1 story; cost \$3000; ordinary construction; cypress shingle roof; furnace heat to cost \$200; gas and electric lighting to cost \$100; Fred H. Ely & Co., Archts., Memphis. (Lately noted.)

Tex., Abilene.—First Presbyterian Church let contract to J. B. Fagan to erect manse; 2 stories; frame; will also repair church building; total cost \$3000.

Tex., Athens.—W. L. Faulk let contract to C. H. Hawn to erect dwelling; 10 rooms; cost \$19,240; Spanish metal tile roof; fireplaces and stoves; electric lighting; L. L. Thurman, Archt., Andrews Bldg., Dallas.

Tex., Dallas.—John S. Greenfield, 804 Southwestern Life Bldg., let contract to W. A. Thomas, 803 Southwestern Life Bldg., Dallas, to erect residence; 8 rooms; 2 stories; cost \$4000; ordinary construction; shingle roof; gas lighting; cement sidewalks. (Lately noted.)

Tex., Edna.—H. Simpson has plans by and let contract to H. J. Gershepske, Edna, to erect rooming-house 32x52 ft.; 2 stories; ordinary frame construction; shingle roof; cost \$3000; painting and papering contract let to Harcourt & Sparr and to D. Arnold for electric work. (Lately noted.)

Tex., El Paso.—Mayfield Building & Investment Co. will erect 4 bungalows on Rio Grande St., 1 on Boulevard St. and 1 on Trowbridge St.; 4, 5 and 6 rooms each; cost \$18,000; ordinary construction; Rex tile shingle roof; hot-air furnaces to cost \$140 each; electric lighting; plans and construction by owner; contract for masonry let to W. C. Taylor, and for plumbing to Mattico Plumbing Co. (Lately noted.)

Tex., Galveston.—Henry Iba, it is reported, let contract to erect bungalow at 32d St. and Ave. R.

Tex., Galveston.—A. Martin, it is reported, let contract to erect 2-story bungalow at 37th St. and Avenue N½.

Tex., Post City.—Double U Co. let contract to W. L. Davis, Post City, to erect 2 dwellings; 28x28 ft.; cost \$2000 each; shingle roof; R. E. Gilmore, Archt., Post City; contract for painting let to W. J. Boles.

Tex., San Antonio.—Lee Kreuger let contract to Loebberg & Reinhardt to erect cottage on Beacon Hill; 6 rooms; cost \$5000.

Tex., San Antonio.—Chas. S. Venable, 205 E. Myrtle St., let contract to W. A. Johnson, San Antonio, to erect residence; 12 rooms; 3 baths; attic and basement; cost \$12,000; ordinary construction; metal-shingle roof; hot-water heat to cost \$1000; electric lighting to cost \$200; cement sidewalks to cost \$300; Atlee B. Ayers, San Antonio. (Lately noted.)

Va., Berkley, Station Norfolk.—W. S. Thompson let contract to erect 6-room residence in Raleigh Heights.

Va., Norfolk.—Dr. C. W. Doughtie let contract to C. W. Beard to erect two 2-story frame residences on 35th St. and 26th St.; cost \$3500.

Va., Norfolk.—James Trimmer let contract to W. W. Seeley to erect residence at Blue-

stone Ave. and 26th St.; gas and electric lights; hot-air heat; cost \$5000.

Va., Richmond.—W. H. Schwartzschild let contract to J. R. Jones to erect residence at 2710 Monument Ave.; 2½ stories; brick; hot-water heat; electric lights; tile and tin roof; cost \$20,000; D. Wiley Anderson, Archt., Richmond.

W. Va., Berkeley Springs.—Herbert Quick will expend \$15,000 to erect residence; 38x55 ft.; 3 stories; rubble stone; slate or heart cypress shingle roof; steam or hot-water heat to cost \$1000; conduit system of electric lighting to cost \$800; concrete walks; Claude & Starck, Archts., Badger Annex, Madison, Wis.; contract lately noted let to Wm. H. Young, Berkeley Springs. (See Machinery Wanted.)

GOVERNMENT AND STATE

Mo., St. Louis.—Mailing Platform.—Treasury Dept., Oscar Wenderoth, Supervising Archt., Washington, let contract at \$5036 to Kremer & Vioral, St. Louis, to erect mailing platform at postoffice. (Previously noted.)

S. C., Fort Moultrie.—Officers' Quarters.—War Dept., Washington, D. C., let contract to Algenon Blair, Montgomery, Ala., to erect 12 officers' quarters. (Lately noted.)

Va., Bedford City.—Postoffice.—Treasury Dept., Oscar Wenderoth, Supervising Archt., Washington, D. C., let contract to R. T. Abbott Construction Co., New York, to erect postoffice; 2 stories and basement; 4240 sq. ft. ground area; non-fireproof; brick facing; composition roof. (Lately noted.)

MISCELLANEOUS

D. C., Washington.—Lincoln Memorial.—Lincoln Memorial Com., Wm. W. Harts, Executive and Disbursing Officer, let contract to M. F. Comer & Co., Toledo, O., at \$215,000 for foundation, and to Geo. A. Fuller Co., Munsey Bldg., Washington, at \$1,567,820 for superstructure of Lincoln Memorial; Henry Bacon, Archt., 101 Park Ave., New York; work under supervision of Secy. of War, Col. Harts, representative, who will also represent Commission. (Lately noted.)

Mo., St. Louis.—Hall.—Evangelical Lutheran Holy Cross Church is reported to have let contract to erect school and hall. (See Schools.)

N. C., Biltmore.—Barn, etc.—Chas. A. Hoitt let contract to erect barn, etc. (See Dwellings.)

N. C., Charlotte.—Home.—Old Ladies' Home let contract to J. A. Newton, Charlotte, to erect home on Belmont St.; cost \$8000; ordinary construction; slate roof; steam heat to cost \$916. (Previously noted.)

Va., Kenbridge.—Hospital.—Dr. T. C. Harris let contract to J. A. Robinson to erect office building and emergency hospital; 50x28 ft.; 8 rooms; slate roof. (Lately noted.)

RAILWAY STATIONS, SHEDS, ETC.

N. C., High Point.—Carolina & Yadkin River Ry., W. E. Price, Supt., will erect depot at Commerce and Green Sts.; 400x60 ft.; cost (without mechanical equipment) \$10,000; mill construction; Cary's roofing; steam heat; electric lighting; Herman Hirsch, Archt., High Point; John Nicol, High Point, Supt. of Construction; subcontract let to I. G. Lawrence.

SCHOOLS

Fla., Gainesville.—State Board of Control, Tallahassee, Fla., let contract at \$23,625.75 to J. L. Crouse, Greensboro, N. C., to erect law building for University of Florida; final plans reported to call for 2 and 3 stories; 112x62 ft.; brick; Indiana sandstone trimmings; tile roof; Warren Webster system of heating to cost \$2000; sub-contracts not let; contract for heating let to Atlanta Steam Heating Co., Atlanta, Ga. Address proposals to P. K. Yonge, Pensacola, Fla.; W. A. Edwards, Archt., Candler Bldg., Atlanta. (Lately noted.)

La., Alexandria.—Sisters of Divine Providence let contract to August Fuessell, San Antonio, Tex., to erect proposed academy building; 4 stories; brick and concrete.

La., New Orleans.—Dominican Fathers, It is reported, let contract to Lionel F. Favrot to erect \$6000 school at Canal and St. Patrick Sts.; 2 stories; Toledano & Wogan, Archts., New Orleans; also reported to erect convent and church buildings. (Lately noted.)

La., Vinton.—Calcasieu Parish School Board let contract to McCammon & McBride, Pine Bluff, Ark., at \$20,717.68 to erect school; heating, plumbing and electric wiring contracts let separately; A. H. Hunphrey, Archt., Room 1, Bloch Bldg., Lake Charles, La. (Lately noted.)

Miss., Starkville.—Y. M. C. A. of Agricul-

tural College let contract to W. J. McGee, Jackson, Miss., to erect building; 100x120 ft.; cost (without mechanical equipment) \$51,200; fireproof (Kahn system) construction; Barrett specification roof; steam heat to cost \$2000; Overstreet & Spencer, Archts., Jackson, Miss.; contract let to Luderbach Plumbing Co., Jackson, Miss., for heating, plumbing, electric work and vacuum cleaner. (Lately noted.)

Miss., Vicksburg.—City let contract to Burkes Construction Co. to erect high school; cost \$40,000; W. A. Stanton, Archt.; contracts let to C. C. Hartwell Co., New Orleans, La., for heating and plumbing, and to Park Auto & Electric Co., Vicksburg, for wiring. (Previously noted.)

Mo., St. Louis.—Evangelical Lutheran Holy Cross Church is reported to have let contract to Kellermann Contracting Co., Roe Bldg., St. Louis, to erect school and hall building at 3636 Ohio Ave.; 3 stories; cost \$45,000; Chas. F. May, Archt., St. Louis.

Mo., St. Louis.—Board of Education will expend (without mechanical equipment) \$190,000 to erect school at Kennerly and Goodfellow Sts.; fireproof; slate roof; cost of heating \$27,000; Wm. B. Ittner, Archt., 9th and Locust Sts., St. Louis; contract lately noted let to E. Gerhard Building Co., Victoria Bldg., St. Louis.

N. C., Roseboro.—City issued \$10,000 bonds to erect school for which plans were prepared by H. E. Bonitz, Wilmington, N. C.; 2 stories; brick; metal roof; hot-air heat; cost \$10,000; contract let to Elkins & Elkins, Fayetteville, N. C.

Tenn., Memphis.—St. Agnes Academy let contract to E. Abele, Memphis, to erect school auditorium and chapel; ordinary construction; composition roof; cost \$40,000; Harker & Cairns, Archts., Memphis. (Lately noted.)

Tex., Bishop.—Bishop Independent School Trustees let contract at \$29,293 to C. D. Patterson, Bishop, to erect high school; 3 stories; 80x100 ft.; 16 classrooms and auditorium; gymnasium, manual-training department, etc. In basement; also let contract at \$12,100 to Kendall & Jenkins to erect 3 2-room buildings; brick; W. J. Ehlers, Archt., Bishop. (Lately noted.)

Tex., Wellington.—School Board, Jno. Williamson, Secy., is reported to have let contract to J. G. Bille to erect school.

STORES

Ala., Andalusia.—C. Frank Galliber, Archt., 425 Bell Bldg., Montgomery, is reported to have let contract to R. A. Chapman, Montgomery, to erect store building; 2 stories; tapestry brick front; concrete floors; offices on second floor; cost \$5000. (Lately noted.)

Ala., Birmingham.—Scott Grocery Co. let contract to M. C. Banks, Birmingham, to erect 1-story brick store building; cost \$3200.

D. C., Washington.—A. Collins will expend \$4000 to make improvements at 2006 14th St. N. W.; James J. Galvin, Contr., 4009 Chesapeake St. N. W., Washington.

D. C., Washington.—Lansburg & Bros., 420 7th St. N. W., let contract James T. Kenyon, 817 14th St. N. W., Washington, to repair four-story brick store at 422-26 7th St.; cost \$3800; Oscar G. Voight, Archt., 405 Corcoran Bldg., Wash.

D. C., Washington.—E. W. Donn estate is reported to have let contract to Upton-Smoat Construction Co., 902 F St. N. W., to erect building at 911 G St. N. W.; cost \$20,000; Donn & Deming, Archts., 808 17th St., Washington.

D. C., Washington.—P. F. Gormley Co., Union Trust Bldg., Washington, Contr., for addition to Palais Royal, let following sub-contracts: Structural steel, Dietrich Bros., Pleasant and Davis Sts.; metal windows, C. D. Pruden Co., Warner and Dock Sts., both of Baltimore, Md.; ornamental iron, Slatter & Cook, New York; excavating, Wm. F. Ceist, 201 8 St. N. E.; brick work, L. E. Murtaugh, 1717 35th St.; fireproofing, Hammett Fireproofing Co., Colorado Bldg.; stone, R. B. Phelps, 9th and Douglas Sts. N. E.; slag roofing and waterproofing, Rose Bros., 1804 14th St. N. W.; slate roofing, J. G. Lindsay, 2120 N. St.; tile and marble, National Mosaic Co., 338 Pennsylvania Ave.; plastering, Murray Bros., 1400 G St. N. W.; plumbing and heating, Standard Engineering Co., Woodward Bldg.; elevators, Otis Elevator Co., Metropolitan Bank Bldg.; mill work, Washington Wood Work Co., 12th and B Sts.; composition floor, Sanitary Flooring Co., Builders' Exchange, all of Washington; painting contract not let; total cost of building \$125,000. (Previously noted.)

Fla., Jacksonville.—Neal Finkelstein, 601 W. Bay St., let contract to N. L. Snelson to

erect store and apartment building; 91x45 ft.; cost (without mechanical equipment) \$12,500; brick; gravel roof; fireplaces; gas and electric lighting; Talley & Summers, Archt., Jacksonville. (Lately noted.)

Fla., Zolfo.—Zolfo Mercantile Co. let contract F. H. Williams, Zolfo, to erect brick store building on 6th Ave.; 100x45 ft.

Ga., Arlington.—Y. M. Fudge let contract to W. S. Beauchamps, Arlington, to rebuild brick store; cost \$3000.

Ga., Lagrange.—Edmondson-Christopher Co. let contract at \$27,000 to Pike Bros. Lumber Co., La Grange, to erect store on Main St.; 3 stories; 50x100 ft.; concrete and mill construction; Walker & Chase, Archts., Atlanta, Ga. (Lately noted.)

Ga., Waycross.—J. Rosenthal let contract to V. C. Parker & Son, Waycross, to erect store building; 2 stories; 26x90 ft.; brick.

La., New Orleans.—Dr. Jos. Conn let contract to erect store and dwelling. (See Dwellings.)

Mo., St. Louis.—H. Herman let contract to S. Grob to erect 2-story store and dwelling at 5161 Easton St.; cost \$3200.

Mo., St. Louis.—H. M. Edmunds let contract to B. J. Charleville to erect 2-story store and tenement-house at 6242-44 Delmar Blvd.; cost \$10,000; P. J. Bradshaw, Archt., St. Louis.

Mo., St. Louis.—Nathaniel Pieper let contract to F. J. Fendler P. Co. to erect 2-story store and dwelling at 701 Bates St.; cost \$6000.

N. C., Newbern.—O. Marks & Son let contract, it is reported, to Rhodes & Underwood, Newbern, to erect building on Middle St. between Pollock and S. Front Sts.; 3 stories; 45x170 ft.; pressed brick and stone.

Okl., Pawhuska.—Trinagle Building Co. let contract to erect store and office building. (See Bank and Office Buildings.)

Mo., St. Louis.—Peter Sondag, 4343 Manchester Ave., will expend \$5500 to erect store at 4341 Manchester Ave.; fireproof and mill construction; gravel roof; hot-water heat to cost \$300; lighting plant to cost \$100; plans and construction by F. Arnold, 4550 Papan St. (Lately noted.)

Tenn., Dyersburg.—Edenton Parker Wholesale Grocery Co. let contract to Sam Bilvins to erect store; 3 stories; cost \$17,500.

Tex., Athens.—Dr. T. M. Matthews let contract to C. H. Hawn to erect store and office building.

Tex., Dallas.—Hiram Grosman let contract to B. F. and C. M. Davis, Dallas, to erect store at Commerce and Ray Sts.; 2 stories and basement, with walls to carry 10 sto-

ries; 75x100 ft.; reinforced steel and concrete; plans by Lang & Wittichell, Dallas.

Tex., Gause.—D. T. Votaw, Livingston, Tex., has contract to erect 34x70 ft. store and 20x40-ft. bank building; cost \$4000.

Tex., Livingston.—W. W. Greer will erect brick business building on Washington Ave.; 2 stories; 22½x64½ ft.; cost \$4000; plans and construction by D. T. Votaw, Livingston.

Tex., San Marcos.—L. W. Wood let contract to Walsh & Burney, 416 Conroy Bldg., San Marcos, to erect brick business block; cost \$10,000.

Tex., San Marcos.—J. M. Cape let contract to Walsh & Burney, San Marcos, to erect 2-story brick building to cost \$25,000. (Lately noted.)

W. Va., Huntington.—M. Broh will expend \$10,000 to erect store and apartment-house; 32x100 ft.; 3 stories; mill construction; tin roof; gas and electric lighting; contract lately noted let to J. E. Berry, Huntington; brick work let to Geo. Sikes, Huntington.

W. Va., Pageton.—Phipps & Smoot, Bluefield, W. Va., have contract to erect store for which plans were prepared by Alex. B. Mahood, Bluefield; cost \$26,549. (Lately noted.)

W. Va., Moundsville.—Trimble & Johnson are reported to have let contract to D. T. Burton, Moundsville, to erect garage and display rooms. (See Motors and Garages.)

WAREHOUSES

Ala., Marion.—Dozier Wholesale Grocery Co. let contract to W. M. Loolers, Marion, to erect warehouse; 60x100 ft. and 24x60 ft.; brick and frame; cost \$4500; fireproof construction; standing seam old-style tin roof; W. E. Beams, Archt., Bessemer, Ala. (Lately reported.)

Ark., Little Rock.—Terminal Warehouse Co. will expend \$75,000 (without mechanical equipment) to erect storage warehouse; 100x150 ft.; 3 stories and basement; fireproof; concrete roof; electric lighting; electric elevator to cost \$3800; H. J. Harker, Archt., Little Rock; contract lately noted let to O. A. Campbell, Little Rock.

Md., Baltimore.—C. D. Kenny Co. let contract to Edw. Brady & Sons, 1113 Cathedral St., Baltimore, to erect warehouse at Eutaw and Little Greene Sts.; 50x70 ft.; ordinary construction; slag roof; \$2000 freight elevator; Baldwin & Pennington, Archts., Professional Bldg., Baltimore. (Lately noted to cost \$30,000.)

N. C., Greensboro.—Southern Real Estate Co. let contract to W. B. Enoch to erect warehouse on Davis St.; 52x100 ft.; 2 stories; brick; cost \$6500.

RAILROAD CONSTRUCTION

RAILWAYS

Ala., Birmingham.—Prest. C. H. Markham of the Illinois Central R. R. and also of Central of Georgia, is quoted saying that plans have been made to improve yards and terminals of the two roads at Birmingham, but the work is not to be done immediately. A. S. Baldwin, Chicago, is Ch. Engr. of the I. C., and C. K. Lawrence, Savannah, Ga., is Ch. Engr. of the C. of G.

Ala., Birmingham.—George I. Brown, V.-P., Birmingham, Ensley & Bessemer R. R. Co., is reported saying that construction will be resumed on the extension from Fairfield to Bessemer, on which about 8 miles of line remain to be built. Financial arrangements have been made.

Ala., Mobile.—According to current report the Alabama, Tennessee & Northern R. R. Co., John T. Cochrane of Mobile, Prest., is contemplating building its own line from Calvert, Ala., south to Mobile, about 35 mi., the company having just filed a mortgage for \$3,663,000 to perfect consolidation of its lines.

Ala., Mobile.—W. F. Owen, receiver, New Orleans, Mobile & Chicago R. R., is quoted saying that work will begin this year on the projected extension from Beaumont to Ansley, Miss., about 75 mi., to connect with the Louisville & Nashville R. R. into New Orleans; also that the northward extension from Middleton, Tenn., to connect for Paducah, Ky., will likewise be started. The latter, if built to Jackson, Tenn., as expected, will be about 40 mi.

Ala., Opelika.—E. F. Curran, Consult. Engr., Atlanta, Ga., is reported investigating for the Stone & Webster Engineering Corporation of Boston, concerning the practicability of building an interurban railway from Auburn to Opelika and Columbus, about 40 mi.

Fla., Kennansville.—South Florida & Gulf Railroad Co. is reported organized by F. B.

Lynch of St. Paul, Minn., president of the Southern Colonization Co., and will apply for charter to build a line from Kennansville to Bassenger, Fla., 36 mi. C. H. Armstrong of Rochester, Minn., is Prest.; Walter F. Schroch of Shokopee, Minn., V.-P., and Henry P. Beuter of Kissimmee, Fla., Secy. and Treas. Construction contracts let to Med. Reed and others. There are, it is said, 25 mi. of grade which can be used.

Ga., Letford.—Savannah & Southern R. R. has built an extension from Norden to Lanier, Ga., 2.2 mi.

Ky., Bowling Green.—Southern Traction Co. plans construction of 4½ mi. line from Barren River via Bowling Green to Laurel St. and Cemetery. Route nearly level. Incorporators: Chas. Roemer, Prest.; J. S. Lewis, V.-P. and Gen. Mgr.; Joe W. Ford, Treas.; Lon D. Hanes, Secy.; P. C. Jesse, H. L. Davis, B. H. Dalton and A. J. Kinnaman.

Ky., Louisville.—The Louisville & Nashville R. R. Co. says it does not contemplate constructing a double track south of Birmingham. This denies a recent press report.

Ky., Paducah.—Paducah & Illinois R. R. Co. is reported surveying for a 12 mi. line from Paducah to a point near where the Metrolouis bridge will be constructed over the Ohio River. T. E. Calvert, Ch. Engr., Chicago, Burlington & Quincy R. R., Chicago, Ill., may give information.

Ky., Paducah.—F. M. Smith, Gen. Mgr. Kentucky Southwestern Electric Ry., Light & Power Co., is reported having placed bonds in Paris, France, for the proposed construction from Paducah to Murray, Ky., about 58 mi. H. C. Rhodes is Prest. and W. A. Calhoun, Ch. Engr., all at Paducah.

La., Deridder.—Shreveport, Alexandria & Southeastern Ry. is reported to have extended the Deridder branch of its Louisiana & Pacific Ry. from Bundick to Hoy, La., 6 mi.

Md., Frederick.—According to a letter received by Mayor Fraley, Wm. H. Hamilton of Washington, D. C., and others propose the construction of the Washington, Frederick & Shenandoah Ry., an electric line to connect Washington with Frederick and also Staunton, Va. A survey was made, it is stated, some time ago.

Md., Union Bridge.—Central of Maryland R. R. from Keymar to Union Bridge, about 5 mi., is reported completed by the Pennsylvania R. R. Co., and is now being operated.

Miss., Gulfport.—Prest. W. H. Hardy is quoted saying that construction of the proposed Gulfport & Western R. R. is assured by April 1. Line is from Gulfport to Covington, La., about 60 mi.

Mo., Jefferson City.—Chicago, Milwaukee & St. Paul Ry. is reported authorized by Missouri Public Service Commission to issue \$20,000,000 of bonds for general betterments to the system. C. F. Loweth, Chicago, is Ch. Engr.

N. C., Andrews.—Hiwassee Ry. Co., chartered by the Legislature, proposes to build a standard-gauge railroad from Andrews to Hayesville, N. C., 24 mi., with proceeds of \$150,000 bonds voted in Cherokee and Clay counties. Secys. are J. W. Walker, Andrews, N. C., and G. H. Haigler, Hayesville, N. C.

N. C., Beaufort.—Seaboard R. R. Co., with principal office at Raleigh, N. C., capital, \$15,000 subscribed and \$275,000 authorized, is chartered to build a line 14 mi. long from Beaufort to Cape Lookout, N. C. C. J. Becker of Wilmington, N. C.; George P. Westervelt, James Hodges and Herbert G. Lord, Jr., all of New Jersey, are incorporators. Winston & Biggs, Citizens' Bank Bldg., Raleigh, N. C., may give information.

N. C., Black Mountain.—Black Mountain Ry. is reported to have made an extension from Pensacola to Escota, N. C., about 3½ mi.

N. C., High Point.—J. Peyton Clarke, V.-P. and Gen. Mgr. North Carolina Public Service Co., and also of Carolina & Yadkin River R. R., is quoted saying he will proceed immediately upon plans to build line from High Point to Winston-Salem, 18 mi., and High Point to Greensboro, 16 mi. Address 43 Cedar St., New York.

N. C., King.—Dan River Ry. Co., which proposes to build a line from King to Asbury, N. C., about 30 mi., has organized thus: H. D. Miller of Clemmons, N. C.; Prest.; E. T. Kapp of Bethania, N. C.; Secy.-Treas.; E. C. Butler of Hamilton, New York, V.-P.; D. W. Wilcox, Gen. Mgr. Rails are reported bought and construction is to begin soon.

N. C., Statesville.—Brooks-Parker Construction Co. of Macon, Ga., is reported to have begun work on the Southern Power Co.'s 5 mi. railroad from Steele's Siding to Lookout Shoals, on Catawba River.

Tenn., Memphis.—An officer of the Southern Ry., according to a report from Washington, D. C., where its headquarters are located, is quoted saying that the company will spend about \$750,000 to build a new classification yard in Memphis. W. H. Wells, Washington, is Ch. Engr. of construction.

Tenn., Maryville.—Hickey & Son of Knoxville have been awarded subcontract for the first section of the Maryville & Knoxville Interurban Ry., for which R. B. Oliver is general contractor. John F. Shea, Knoxville, is V.-P. and Knox Burger, Maryville, Secy. and Treas.

Tenn., Murfreesboro.—Murfreesboro Electric Ry. Co. organized nearly two years ago to build from Nashville to Murfreesboro and Woodbury, Tenn., about 50 mi., is reported surveying from Nashville to Murfreesboro. R. T. Wilson of Nashville and others are interested. B. B. Howard & Co. are Engrs.

Tex., Athens.—J. T. LaRue, Prest.; John W. Murchison, E. A. Landman and others of the Young Men's Business League have offered \$5,000 bonus and right of way for a railroad from Athens to Grand Saline, Tex., about 35 mi.

Tex., Fort Worth.—Survey is completed from Fort Worth to Denton, Tex., 37 mi., for the Fort Worth-Denton Traction Co., E. E. Baldridge, Prest., and John Mead, 2317 Lincoln Ave., Engr.

Tex., Galveston.—Gulf, Colorado & Santa Fe Ry. has authorized expenditure of \$106,915 for improvements at various points, including \$75,816 for grade revision between Temple and Cleburne, Tex.; nearly \$4000 for bridges, trestles and culverts; sidings and spur tracks over \$6000, and yards, about \$200. F. Merritt, Galveston, is Ch. Engr.

Tex., Mertzon.—Kansas City, Mexico & Orient R. R. Co. has been ordered by a court decree to extend to Sherwood, about 2 mi., the decree, however, not to take effect until the receivership is terminated. S. B.

Hovey and M. L. Mertz, San Angelo, Tex., are receivers.

Tex., Roaring Springs.—Quanah, Acme & Pacific Ry., says a report, has completed its extension from Roaring Springs as far as MacBain, 3½ mi.

Tex., Houston.—Trinity & Brazos Valley R. R., according to a local report, will spend about \$250,000 for ballasting and bridge improvements, besides betterments to roadbed, this on 84 mi. of line. J. W. Robins is Prest. and Gen. Mgr. at Houston, and S. Baldwin is Engr. at Teague, Tex.

Va., Norfolk.—Norfolk Southern R. R. is reported to have sold \$600,000 of bonds to Harris, Forbes & Co. of New York, the proceeds to be used for additions, improvements, etc. F. L. Nicholson, Norfolk, Va., is Ch. Engr.

Va., Wytheville.—H. G. Guyan of Humbert, Pa., is reported interested in plans for a railroad in this (Wythe) county, Va., to develop timber lands.

W. Va., Naugatuck.—Norfolk & Western Ry. is reported preparing to build the Tug River & Kentucky R. R. (for which it recently obtained a charter in Kentucky) from Naugatuck through coal fields in Kentucky, going back toward Iager, W. Va. J. E. Crawford, Roanoke, Va., is Ch. Engr.

W. Va., Williamson.—Norfolk & Western Ry., it is reported, has bought more land to extend its east end yards at Williamson. J. E. Crawford, Roanoke, Va., is Ch. Engr.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

"WANTS"

Air Compressor.—See Sawmill Equipment, New Orleans, La.

Ammonia Fittings.—Domestic Ice Machine Co., M. T. Brown, Prest., 423 W. Adams St., Jacksonville, Fla.—Prices on ammonia fittings; all kinds.

Atomizer.—L. O. Smith, Box 185, Wilmington, N. C.—Tin atomizer; wants addresses of manufacturers.

Bags (Burlap or Paper).—Fishersville Lime Grinding Co., Wm. C. Miller, Secy., Fishersville, Va.—Burlap or paper bags for ground limestone.

Baling Machinery.—D. B. Loveman Co., Chattanooga, Tenn.—Waste paper baler; correspondence with manufacturers of hand and electric balers.

Bank Fixtures.—First National Bank, Murfreesboro, Tenn.—Prices on bank fixtures.

Boiler.—Hamburg Boiler Works, Henry Seiders, Propr., Hamburg, Pa.—72-in. by 18-ft. butt-joint, triple-riveted, horizontal tubular boiler; second-hand; can also use 60 H. P. second-hand horizontal tubular boiler. (See Tubes (Boiler).)

Boilers.—E. J. Erbeling, heating contractor, Augusta, Ga.—Prices on boilers.

Brake (Flax and Hemp), etc.—Vittore Ravizza, Corso S. Celso, 42 Milan, Italy. Interested in flax and hemp scotching and braking machinery.

Bridge Construction.—City of Clarksburg, W. Va.—Bids until Mch. 12 to erect concrete bridge 581 ft. long and steel bridge 450 ft. long; for details apply G. C. Finley, City Clerk, or D. D. Britt, Engr., Clarksburg.

Bridge Construction.—Chambers County Comms., Lafayette, Ala.—Bids until Mch. 17 to grade, drain, build concrete piers and abutments for bridges and to furnish and erect steel for same along 11 mi. Dudleyville Rd.; expenditure about \$32,000; plans and specifications at office of J. J. Robinson, Jr., Probate Judge.

Bridge Construction.—Brevard County Comms., J. F. Mitchell, Clerk, Titusville, Fla.—Bids until March 2 to improve and repair present county bridge across Crane Creek; cost not to exceed \$7000; plans and specifications at Clerk's office.

Bridge Construction.—Cumberland County Comms., Felton R. Hall, Clerk, Fayetteville, N. C.—Bids until Feb. 23 to construct concrete bridge across Big and Little Rockfish creeks at McNell's Bridge; specifications at office of clerk.

STREET RAILWAYS

Ark., Little Rock.—A. C. Read, Prest. Factoria Land Co., is quoted saying preparations are being made to build a street railway from the Biddle extension of the Little Rock Railway & Electric Co., now under construction, to Factoria Addition.

Fla., Jacksonville.—Jacksonville Traction Co. has been authorized to double-track its line to the baseball park. Hardy Croom is Gen. Mgr.

Ga., Griffin.—Surveys are reported made for two street railway lines in Griffin, one of them to Experiment, 2 mi. west. The Board of Trade may give information.

Md., Cumberland.—Cumberland Electric Ry. Co. is reported contemplating an extension to Mapleside. Milnor Roberts, Jr., is Supt.

Mo., Kansas City.—An ordinance is before the City Council to grant franchise to the Metropolitan Street Ry. Co. to build a line on 24th St. from Main St. to Grand Ave. to reach the new Union Station. An extension to other streets is also expected.

Tex., Houston.—Houston Electric Co. is granted franchise for extension through Sunset Heights. David Daly is Mgr.

Tex., San Antonio.—San Antonio Traction Co. has begun relaying some of its tracks and also to do some double-tracking. E. E. Eysenbach is Gen. Mgr.

Cotton Machinery.—Appalachian Mills, Knoxville, Tenn.—Bids April 1 for cotton yarn machinery, 600 H. P. plant, etc., costing about \$150,000.

Crane.—See Sawmill Equipment, New Orleans, La.

Crane (Locomotive).—Willis Shaw Machinery Co., N. Y. Life Bldg., 39 La Salle St., Chicago, Ill.—8-wheel locomotive crane equipped for handling clam shell.

Crusher.—Willis Shaw Machinery Co., N. Y. Life Bldg., 39 S. La Salle St., Chicago, Ill.—No. 4 Austin gyratory crusher.

Decorating.—H. E. Yessler, Hagerstown, Md.—Prices on decorating for 4lx24-ft. theater.

Distilling (Alcohol) Apparatus.—Louis Spencer Daniel, care Chamber of Commerce, Cordele, Ga.—Data and prices on machinery to manufacture denatured alcohol.

Dredge Bucket.—Willis Shaw Machinery Co., N. Y. Life Bldg., 39 S. La Salle St., Chicago, Ill.—1-yd. clam-shell bucket.

Drag Line Machines.—Jas. F. Seller, Room 423, N. Y. Life Bldg., Chicago, Ill.—Two small drag line machines.

Electrical Equipment.—City of Bishopville, S. C., W. L. Parrott, Mayor.—Bids on installation 35 H. P. crude oil engine to operate 20 K. V. A. generator, 3-phase, 60-cycle, 2200 volts, bids received on installation complete, with switchboard, generator and engine; S. P. Sutton, Engr., municipal water, light and power plant.

Electric Motors.—Shapiro Antique Shops, Flat Iron Bldg., Charlotte, Granby and Bute Sts., Norfolk, Va.—Second-hand electric motors of 2, 3, 5 and 7½ H. P. A. C., 220 volts, 3-phase. State size, make and size of pulley.

Electric Motors.—Domestic Ice Machine Co., M. T. Brown, Prest., 423 W. Adams St., Jacksonville, Fla.—Prices on ½ to 10 H. P. electric motors.

Electric Power Plant.—Dallas County Comms., Dallas, Tex.—Bids (addressed to C. E. Gross, County Auditor) until March 11 to install, complete, high and low pressure power plant; piping, engines, boilers, generators, motor generator set, switchboard, cabling of generators, switchboard wiring, etc., in County Criminal Courts and Jail Bldg.; separate bids on each of different types of apparatus; plans and specifications at office of H. A. Overbeck, Archt., 501 Juanita Bldg., Dallas.

Electrical Equipment.—Arkansas Hydro-Electric Co., U. S. Bratton, Secy., Little Rock, Ark.—Prices on electrical equipment for 4-unit installation, total of 10,000 H. P. (See Water Wheel.)

Electrical Equipment.—Navy Dept., Bureau of Yards and Docks, H. R. Stanford, Chief of Bureau, Washington, D. C.—Bids until March 14 for alternating current electric distributing system, transformers, cables, motors and 2 feeder panels at Naval Training Station, Newport, R. I.; estimated cost, \$3100; plans and specifications obtainable on application to bureau.

Electrical Equipment, etc.—Office of Gen. Purchasing Officer, Isthmian Canal Com., F. C. Boggs, Maj., Corps of Engrs., Washington, D. C.—Bids until March 2 for electrical attachments and fixtures, electric wire, soldering sticks, wire clamps, pliers, galvanized wire, nails, bolts, repair links, stovepipe, valves, tackle blocks, packing, gaskets, rubber valves, wheels for wagons, steel tapes and vitrified sewer pipe. Blanks and general information relating to circular No. 829 may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and 1086 North Point St., San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

Electrical Installation.—Chamber of Commerce, Louis Spencer Daniel, Secy., Cordele, Ga.—Bids on 70 "White Way" posts, 5 lamps, weight of post about 550 to 600 lbs.; delivered Cordele; separate bids on bulbs and globes; also bids on installation of the 70 posts.

Elevator Machinery.—Navy Dept., Bureau of Yards and Docks, H. R. Stanford, Chief of Bureau, Washington, D. C.—Bids until Mch. 14 to furnish and install elevator machinery, including alterations and repairs to freight elevator in Bldg. 31, Navy-yard, Boston, Mass.; estimated cost \$1300; specifications (No. 2362) on application to bureau or to commandant of navy-yard named.

Electrical Machinery.—City of Shattuck, Okla.—Will purchase one or more electric motors and pumps of 200 gals. per minute against 350-ft. head from bottom of well; A. F. Breuncke, Supt., Gage, Okla.

Electrical Machinery.—Whitney Eve Co., electrical contractor, Augusta, Ga.—Prices on 80 K. W. generator, direct-connected to 125 H. P., 230-volt, 2-phase motor (generator set) for \$425,000 office building.

Elevator (Grain) Machinery.—Gulf Compress Co., Memphis, Tenn.—Elevator machinery for unloading, elevating, even-weighting, cleaning, clipping and sacking oats; electric power.

Engine (Turbine).—Monson Mfg. Co., Yale, Va.—Steam turbine complete for driving No. 2 sawmill carriage; new or second-hand; describe and give price first letter.

Engine (Gasoline).—Thos. S. Burgess, Southern Pines, N. C.—Prices on gasoline engine.

Engines (Gasoline and Oil).—Domestic Ice Machine Co., M. T. Brown, Prest., 423 W. Adams St., Jacksonville, Fla.—Prices on gasoline, kerosene and crude oil engines; 2 to 25 H. P.

Engines.—E. J. Erbeling, heating contractor, Augusta, Ga.—Prices on engines.

Filter Equipment.—Board of Awards, John Hubert, Acting Prest., Baltimore, Md.—Bids until Feb. 25 (extended date) to install equipment for filtration plant at Lake Montebello, contract No. 22; plans and specifications at office of Water Dept., Ezra B. Whitman, Water Engr., City Hall.

Furniture (Office).—See Postoffice Equipment.

Gas Fixtures.—Sendrift Sheet Metal Works, Seadrift, Tex.—Catalogues of gas fixtures.

Grain Drill Spouts.—Star Pea Machine Co., Aberdeen, N. C.—Addresses of manufacturers of spouts for grain drills.

Grates.—Guy F. Donohoe, Vicksburg, Miss.—Addresses of grate manufacturers; view to arranging for manufacture of shaker grate; patent applied for.

Grist Mill.—C. G. Smith, Brierfield, Ala.—Correspondence with manufacturers of plantation grist mill.

Grouting.—Board of Public Works, D. B. McKay, Chmn., Tampa, Fla.—Bids until Feb. 17 to furnish material and labor to grout with pitch filler brick pavement on Polk St. from Ashley to Jefferson St. and Ashley St. from Harrison St. to Henderson Ave.; about 14,700 sq. yds.

Gymnasium Equipment.—J. W. Kirwin, care of St. Mary's Seminary, La Porte, Tex.—Prices on steel lockers and gymnasium outfit.

Handles.—W. C. Welch, Box 114, Jackson, Miss.—Hoe, rake and pitchfork handles.

Hardware.—See Electrical Equipment, Isthmian Canal Com.

Heating Plant.—Office of Depot Q. M., Wm. E. Hunt, Capt. Q. M. Corps, U. S. A., El Paso, Tex.—Bids until Feb. 25 to install hot-water heating system in officers' quarters No. 6 at Fort Bliss, Tex. Information on application.

Heating Plant.—D. W. Fulp, Bluefield, W. Va.—Prices on boiler and radiators for steam-heating plant for \$10,000 building.

Heating Plant.—W. L. Toney, Belzoni, Miss.—Prices on hot-air heating plant for \$7000 residence.

Heating and Plumbing Materials.—E. J. Erbeling, heating contractor, Augusta, Ga.—Prices on plumbing material, pipe and fittings for heating and plumbing for \$425,000 office building.

Ice Machinery.—Salisbury Electrical Constructing Co., Salisbury, N. C.—Prices on 2-ton ice plant propelled by water-power.

Irrigation System.—C. J. Thomas, Prest., Brazos Irrigation Co., Box 692, Dallas, Tex.—Correspondence with contractors relative to proposed construction of 10,000-acre gravity irrigation system near Hawley, Tex.

Jail Equipment.—Jas. F. Gause, Jr., Wilmington, N. C.—Prices on padded cells, steel bars, doors, prison beds, ventilating systems and other equipment used in jails and stockades.

Knitting Machinery.—Avalon Hosiery Co., branch of Elizabeth City Hosiery Co., Elizabeth City, N. C., letting contract for hosiery knitting equipment; 1500 doz. pairs daily.

Leathers.—Francois & Michel Leonidas, agents Generaux de Pluiseurs, Smyrna, Turkey in Asia.—Samples and prices on leathers and shoes (calf and kid). (See Textiles, etc.)

Lighting Equipment.—Rev. J. L. Griffiths, pastor, M. E. Church, Box 245, Wauchula, Fla.—Prices on electric lighting equipment for \$10,000 church building.

Lime-grinding Plant.—Dr. R. W. Garrett, Charlottesville, Va.—Data on process, management and cost of machinery for plant to grind lime for agricultural use.

Locomotive (Compressed Air), etc.—Navy Dept., Bureau of Yards and Docks, H. R. Stanford, Chief of Bureau, Washington, D. C.—Bids until Mch. 14 for compressed air locomotive; 3-stage charging compressor; pipe and fittings for stationary storage and charging stations, and 4 flat cars for naval magazine, Kuahua Is., Pearl Harbor, Hawaii; estimated cost \$7500; specifications (No. 2063) obtainable from bureau.

Mechanical Equipment (Building).—Mechlin & Starr, Wilkins Bldg., Washington, D. C.—Bids on mechanical equipment for emergency hospital at Washington.

Mica.—W. C. Welch, Box 114, Jackson, Miss.—Data on mica mining in Mississippi, uses of mica, market, etc.

Milling Machine, Hoisting Rope, etc.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids until Mch. 10 to furnish miscellaneous lot of dies for cups, bowls and plates, schedule 6417; 1800 ft. 3/4-in. plow steel hoisting rope, schedule 6413; 4300 lbs. miscellaneous round rolled naval brass and 900 lbs. 3/4-in. round naval brass, schedule 6423; 14,300 lbs. round rivet rod brass, schedule 6415; delivery Navy-yard, Norfolk, Va.; 6400 lbs. miscellaneous sheet brass and 5800 lbs. miscellaneous phosphor sheet bronze, schedule 6421; universal milling machine, No. 3 cone drive; delivery Navy-yard, Washington, D. C.; for copies of schedule apply to navy pay office nearest navy-yard.

Oil.—R. P. Johnston (for Haywood Fruit Exchange), 20 Temple Court, Asheville, N. C., or Bolling Hall, Waynesville, N. C.—Quotations on car lots or less of fuel oil, testing about 25 to 27 degrees Beaume, for orchard heating; oil in barrels, delivered Waynesville.

Overall Machinery.—L. S. Nottingham, Jr., Esmond, Va.—Data and prices on equipment for small overall factory.

Paper Mache Fire Buckets.—"Croml" Engineering Co., Floor A, Milburn House, Newcastle-on-Tyne, Eng.—Correspondence with manufacturers of paper mache fire buckets for electrical purposes.

Paper Machinery.—Harry S. Lybarger, 349 Main St., Burns Bldg., Coshocton, O.—Addresses of manufacturers of machinery for making straw paper; also data on Fourdrinier machine.

Paving.—City of De Quincy, La.—Bids until March 10 to construct about 60,525 sq. ft. concrete sidewalk and 14,480 lin. ft. curb; plans and specifications on request, from Mayor or T. H. Mandell, Engr., Lake Charles, La.

Paving, etc.—Board of Comms., L. A. Pollock, Commr. of Streets, Huntington, W. Va.—Bids until Feb. 26 (extended date) to grade, curb and pave with brick portions of 2d, 9th, Collins, Norway, Adams, Jefferson, Madison, Burlington and 12th Aves., 1st, 7th, 10th, 17th, 18th, 25th, 27th, Elm, Gallier, Short, Main, 16th and 28th Sts.; A. B. Maupin, City Engr.

Paving.—City, L. M. Johnson, Clerk, Leesburg, Fla.—Bids Feb. 24 to construct 16,000 ft. cement sidewalks.

Paving.—E. B. Bonney, City Secy., Houston, Tex.—Bids until Feb. 23 to gravel about 20,000 sq. yds. gravel pavement; E. E. Sands, City Engr.

Paving, etc.—City of Bluefield, W. Va.—Bids until Mch. 13 to pave curb and gutter with bituminous macadam Jefferson and Washington Sts. from Adams St. to Cumberland Gap turnpike; J. T. Akers, City Auditor.

Paving, etc.—E. B. Bonney, City Secy., Houston, Tex.—Bids until Feb. 20 to pave McKinney Ave. from Velasco St. to east line of Eastwood Ave.; also construct standard combined curb and gutters on Crockett St. from Sawyer St. to White Oak bayou; E. E. Sands, City Engr.

Paving.—Magna Park Land Co., Carter Bldg., Houston, Tex.—Bids invited to construct 48,000 ft. cement sidewalk in Central Park; Howe & Wise, Engrs., 722 First National Bank Bldg., Houston, Tex.; specifications ready after Feb. 10.

Paving.—City of Booneville, Miss.—Let contract March 2 to grade, drain and surface several miles of streets to be built in connection with county roads now under

construction; plans and specifications with City Clerk, H. E. Barnett.

Picture-framing Supplies, etc.—J. A. Doyal, Magnolia, Miss.—Addresses of manufacturers of picture-framing devices and supplies.

Pipe (Iron).—McKee & Co., 204 Twigg St., Tampa, Fla.—Prices on wrought-iron pipe; view to jobbing representation, South Florida.

Pipe.—C. E. Ashburner, City Mgr., Springfield, O.—Bids until March 2 to furnish 125 tons 6-in. class C, cast-iron pipe and fittings, standard specifications, weight per ft. 34 lbs.; delivery f. o. b. cars Springfield; shipment soon as possible after letting of contract; information with City Mgr.

Pipe Organ.—J. L. Griffiths, pastor, M. E. Church, Box 245, Wauchula, Fla.—Prices on pipe organ for \$10,000 church building.

Piping and Casing.—Texas Supply Co., Beaumont, Tex.—Wants to purchase pipe and casing, 8 to 12 in.; will pay \$30 per ton f. o. b. Beaumont.

Plumbing, etc.—Dept. of Interior, Lewis C. Laylin, Asst. Secy., Washington, D. C.—Bids until Feb. 27 for plumbing installation, and of marble, tile and terrazo work in Room 130, Patent Office Bldg., Washington; plans and specifications obtainable on application to chief clerk of Dept.

Postoffice Equipment.—J. M. Truluck, Lake City, S. C.—Addresses of manufacturers of and dealers in postoffice equipments.

Pulp Machinery.—Wm. Taylor, Maplesville, Ala.—Data on converting stumpage into pulp for paper mills, and addresses of manufacturers of equipment.

Pumps.—E. J. Erbeling, heating contractor, Augusta, Ga.—Prices on pumps.

Pumps.—City of Shattuck, Okla.—Will purchase one or more pumps; A. F. Breuncke, Supt., Gage, Okla. (See Electrical Machinery.)

Pumps.—Mayor and Comms., Gulfport, Miss.—Bids until March 3 for motor-driven constant-duty pump, delivered f. o. b. Gulfport; direct connected; capacity 750 gals. per minute against 30-lb. head with 6-in. discharge; motor to be 220 volts, 3-phase and 60 cycles; details on application to H. D. Shaw, City Engr.

Rails.—Hamburg Boiler Works, Henry Seiders, Propr., Hamburg, Pa.—300 ft. 25 to 30-lb. second-hand rails, with splices and bolts, for 150-ft. industrial railway.

Rails.—Farrar Lumber Co., Dalton, Ga.—12 or 16 lbs. relay track iron and spikes for drykila.

Railroad Equipment.—Tampa, Atlantic & Gulf Ry., Edw. Walker, Gen. Mgr., Box 1061, Tampa, Fla.—Prices in about 6 months on equipment for 230 mi. railroad (from Tampa to Fort Lauderdale), including 6 drawbridges and 5 mi. trestle.

Railroad (Gasoline) Construction Materials, etc.—Construction, Box 364, Lynchburg, Va.—Prices and estimates on material and equipment for 1 1/2 to 2 mi. gasoline line; 60-lb. rails; also data on construction and operation.

Road Construction.—Crenshaw County Comms., Luverne, Ala.—Bids until Mch. 16 to grade, drain and surface with sand-clay part of road beginning at Luverne and extending to Montgomery county line; expenditure, \$10,542.26; W. S. Keller, State Highway Engr., Montgomery, Ala.

Road Construction.—State Roads Com., O. E. Weller, Chmn., 601 Garrett Bldg., Baltimore, Md.—Bids until March 3 to build 5 sections State highway, about 24.95 mi., as follows: Allegany county, 7.88 mi. resurfacing, National pike, from Green Ridge to Washington county line; Baltimore county, 2 mi. concrete, bituminous concrete or macadam, Belair Rd., from Kingsville to Harford county; Cecil county, 6.46 mi. gravel, concrete or macadam, Chesapeake City Rd., from Bohemia River to Fredericktown; Baltimore county, 3.37 mi. resurfacing, Frederick pike, from Melvin Ave. to Patapsco River; Garrett county, 5.21 mi. resurfacing, National pike, from Grantsville to Keyser; amounts approximate; plans and specifications on application.

Road Oiling.—State Roads Com., O. E. Weller, Chmn., 601 Garrett Bldg., Baltimore, Md.—Bids until Feb. 26 for oiling 8 sections State highway, about 420 mi., requiring about 1,225,000 gals. oil, as follows: Salisbury residency—Somerset, Worcester and Wicomico counties, 48.10 mi., 120,843 gals.; Eastern residency—Dorchester, Talbot and Caroline counties, 27.67 mi., 83,260 gals.; Chestertown residency—Queen Anne's, Kent and Cecil counties, 43.98 mi., 109,827 gals.; Baltimore residency—Harford and Balti-

more counties, 62.87 mi., 207,639 gals.; Frederick residency—Frederick, Carroll and Howard counties, 68.72 mi., 199,022 gals.; Cumberland residency—Washington, Allegany and Garrett counties, 76.69 mi., 233,232 gals.; Hyattsville residency—Montgomery, Prince George's, Anne Arundel and Washington Blvd., 71.76 mi., 224,405 gals.; La Plata residency—Charles and St. Mary's counties, 19.72 mi., 45,354 gals.; forms supplied by State Roads Com., and specifications furnished on application.

Road and Bridge Construction.—Galveston County Comms., John M. Murch, County Auditor, Galveston, Tex.—Bids until Feb. 25 for mudshell spread roads and building reinforced concrete bridges and culverts on mainland as follows: League City—Friendswood Rd., about 9 1/2 mi.; League City—Kemah Rd. to Clear Creek, about 6 mi.; Kemah—San Leon Rd., about 6 mi.; Kemah—San Leon Rd., about 5 mi.; Dickinson—San Leon Rd., about 9 mi.; Hitchcock—La Marque Rd., about 5 mi.

Roofing.—Rev. J. L. Griffiths, pastor, M. E. Church, Box 245, Wauchula, Fla.—Prices on metal roofing for \$10,000 church building.

Rope Machinery.—Vittore Ravizza, Corso S. Celso, 42, Milan, Italy.—Interested in rope-manufacturing machinery.

Sawmill.—C. G. Smith, Brierfield, Ala.—Correspondence with manufacturers of plantation sawmill machinery.

Sawmill Equipment.—P. A. Cazes, 427 Dryades St., New Orleans, La. (representing lumber company building steel double band sawmill in Florida).—Prices on following used machines, modern and A-1 condition: Engine lathe, 24 to 30 in. by 8 to 14 ft.; engine lathe, 14 to 16 in. by 8 to 10 ft.; engine lathe, 9 to 12 in. by 6 to 8 ft.; all C. R. (Q. C. G. preferred); driving wheel or axle lathe (old style); lathe and drill chucks; bolt threading machine; pipe threading machine; 3 emery grinders; cold metal saw; set forming or bending rolls; disk grinder; flexible shafts; 6 machinists' vises; steam or air hammer; forge blower; portable crane; alligator or rotary shear; punch press; air compressor (for shop); planer; 16 to 24-in. shaper; 4 to 5-ft. radial drill; 20 to 30-in. upright; sensitive radial; steam pile driver; speed lathe (for wood); scroll band saw (for wood). Give details, including makers' names, time used, etc., shipment point and lowest cash prices f. o. b.

Seating.—J. L. Griffiths, pastor, M. E. Church, Box 245, Wauchula, Fla.—Prices on pews for \$10,000 church building.

Seating.—H. E. Yessler, Hagerstown, Md.—Prices on seating for 41x240 ft. theater.

Seating.—Rev. C. V. Brooks, Teachey's, N. C.—Prices on seats for \$8000 brick church building, Wallace, N. C.

Sewers.—W. E. Rushing, Mayor, Atmore, Ala.—Bids until Feb. 20 to construct sanitary sewer system according to plans and specifications at office of Mayor.

Sewers.—City, L. A. Pollock, Commr. of Streets, Wharfs, etc., Huntington, W. Va.—Bids until Feb. 26 to construct 3x3-ft. 8-in. trunk sewer in 7th St., about 1800 ft.; A. B. Maupin, City Engr.

Sewers.—City of Miami, Fla., Wm. B. Moore, Clerk.—Bids until Feb. 19 to lay and install following sewer mains and pipes: 8-in. terra-cotta sewer main on 6th St. from center of Ave. I to center of Ave. J, 550 ft.; 10 6-in. terra-cotta service pipes extending from sewer main from center of Ave. I to center of Ave. J, 225 ft.; 8-in. terra-cotta sewer main on 9th St. from center of Ave. M to center of Ave. L and on Ave L from center of 9th St. to Miami River, 894 ft.; 14 6-in. terra-cotta service sewer mains from center of Ave. M to center of Ave. L and on Ave L from center of 9th St. to Miami River, 315 ft.

Sewers.—City, L. A. Pollock, Commr. of Streets, Wharfs, etc., Huntington, W. Va.—Bids until Feb. 19 to construct certain lateral sewers, 10 and 12-in., in various alleys; also 18-in. trunk sewer in 6th St.; A. P. Maupin, City Engr.

Shears.—See Sawmill Equipment, New Orleans, La.

Shoes.—See Textiles, etc., Smyrna, Turkey in Asia.

Soap Machinery.—Luis G. Ramirez, Apartado 21, La Piedad, Mich., Mex.—Data on manufacture of soap and correspondence with producers of "reactive to be added to oil for making soap."

Steam Shovel.—A. M., care Manufacturers Record, Baltimore, Md.—Revolving shovel; about 1 1/2-yd.; late build and low price.

Steel, etc.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-

Gen., Washington, D. C.—Bids until Mch. 3 to furnish 41,100 lbs. B-2 hoops gun steel and 79,170 lbs. liners nickel steel, schedule 6109; steel liners and hoops, schedule 6346; bromide paper, schedule 6369; lumber, schedule 6378; sheet steel, steel ridging, iron doors and shutters, brick, schedule 6379; structural steel, I beams, nickel steel bars, schedule 6380; delivery Navy-yard, Washington, D. C.; installation of coaling tower at Indian Head, Md., schedule 6330; for copies of schedules apply to navy pay office nearest navy-yard.

Steel Towers.—Navy Dept., Bureau of Yards and Docks, H. R. Stanford, Chief of Bureau, Washington, D. C.—Bids until Mch. 28 to construct 4 steel towers in canal zone; plans and specifications obtainable on application to bureau.

Steel Work.—Navy Dept., Bureau of Yards and Docks, H. R. Stanford, chief, Washington, D. C.—Bids until March 28 to erect structural steel work for coaling plant, Pearl Harbor, Hawaii; estimated cost \$60,000; specifications (No. 2069) on application to bureau or to commandant of naval station named.

Telephone Equipment.—War Dept., Office of Chief Signal Officer, Chas. S. Wallace, Capt., Signal Corps, U. S. A., Washington, D. C.—Bids until Feb. 23 to furnish miscellaneous lot of telephone equipment, including jars for gravity battery, 12,500 brackets, 17,500 pony glass double groove insulators, 16 pole seats, 100 fuses, type 2; 150 fuses, type 3; 6 porcelain sockets, 25 caps for hand receivers, 10 3-bar generators and 3 terminal boxes. Send for specifications.

Textiles, etc.—Francois & Michel Leonidas, agents Generaux de Plusieurs, Smyrna, Turkey in Asia.—Samples and prices, with view to agencies, from manufacturers of cloths, serges, tweeds, stuffs, leathers and shoes (calf and kid.)

Threshing Machine.—C. G. Smith, Brieffield, Ala.—Correspondence with manufacturers of plantation threshing machine.

Tile (Clay) Machinery.—Choctaw Brick & Gas Co., T. T. Edwards, Supt., Mansfield, Ark.—Receiving bids on tile machinery.

Tubes (Boiler).—Hamburg Boiler Works, Henry Seiders, Propr., Hamburg, Pa.—120 3-in. tubes suitable for retubing boiler; to cut 16 ft. 2 in. in length; second-hand.

Vacuum Bottles.—Decatur Foundry, Furnace & Machine Co., Decatur, Ind.—Prices on vacuum bottles in quantities.

Vacuum Cleaner.—M. W. Reynolds, care Reynolds & Thornhill, Bluefield, W. Va. Vacuum cleaner for church use.

Valves, etc.—C. A. Stillions (contractor for municipal water-works improvements), Eureka Springs, Ark.—Prices on heavy water pipe valves and sluice gates.

Ventilating.—Jas. F. Gause, Jr., Wilmington, N. C.—Prices on ventilating systems for jails and stockades. (See Jail Equipment.)

Water Wheel.—Arkansas Hydro-Electric Co., U. S. Bratton, Secy., Little Rock, Ark.—Prices on water wheel equipment for 4 turbines under 90-ft. head with 70,000 cu. ft. water per minute. (See Electrical Equipment.)

Water Wheels.—Salisbury Electrical Contracting Co., Salisbury, N. C.—Prices on water turbine to propel 2-ton ice plant.

Water-works.—City of Moline, Kans.—Bids until Feb. 23 to furnish materials and construct water-works system; 1400 Hn. ft. 8-in. 1925 ft. 6-in. and 6000 ft. 4-in. class B cast-iron pipe; 7000 lbs. special castings, fire hydrants, valves, etc.; 60,000-gal. tank and 125-ft. tower; plans and specifications with City Clerk and obtainable from Benham Engineering Co., Consult. Engrs., 435 American National Bank Bldg., Oklahoma City, Okla.

Water-works Materials.—See Valves, etc.

Water-works Construction.—Public Utility Co., Campbellsville, Ky.—Bids on laying water main and building reservoir and filter. Address T. Estus, Lebanon, Ky.

Water-works.—Office City Clerk, Cuba, Ill.—Bids until Mch. 6 to construct 60,000-gal. steel tank, brick pump-house 12x12 ft., and deep well pump driven by electric motor or oil engine; specifications with V. L. Durand, City Clerk, or in office of Engr., Fuller-Contt Co., St. Louis, Mo.

Well-drilling.—Radium Oil & Gas Co., C. H. Cooley, Mgr., Claremore, Okla.—Bids on drilling up to 2000 ft. in Blaine county.

Wharf.—Board of Port Comms., Robt. G. Guerard, Pres., New Orleans, La.—Bids

until Feb. 25 to complete Pauline St. wharf; plans and specifications at office of Saml. Young, 200 New Orleans Court Bldg., New Orleans.

Wire.—War Dept., Office of Chief Signal Officer, Chas. S. Wallace, Capt., Washington, D. C.—Bids until Mch. 3 to furnish 125 mi. G. I. wire, 100,000 ft. outside distributing wire and 25,000 ft. house wire. Send for specifications.

Wire Cloth.—McKee & Co., 204 Twiggs St., Tampa, Fla.—Prices on wire cloth; view to jobbing representation, South Florida.

Wire Nails.—McKee & Co., 204 Twiggs St., Tampa, Fla.—prices on wire nails; view to jobbing representation, South Florida.

Wire, Wire Strand, etc.—Mississippi River Com., E. M. Markham, Maj., Engrs., First and Second Dist., U. S. Engr. Office, Custom-house, Memphis, Tenn.—Bids until Feb. 25 to furnish 787,000 lbs. galvanized wire, silicon bronze wire, wire strand and staples and 30,000 wire rope clips. Information on application.

Woodworking Machinery.—F. C. Hendrickson, 12 Water St., Cumberland, Md.—Catalogues and prices on locust pin machinery, including saws, turners, etc.

Woodworking Machinery (Lathe).—John L. York, Four Oaks, N. C.—Lathe for turning axe, pick, hammer handles, etc.

Woodworking Machinery.—Thos S. Burgess, Southern Pines, N. C.—Prices on rip saw and planer combined.

FINANCIAL NEWS

Investment Bankers' Annual.

The proceedings of the second annual convention of the Investment Bankers' Association of America, which was held October 28, 29 and 30 last in Chicago, have been compiled by Frederick R. Fenton, secretary, and published in a handsome half leather bound volume of more than 300 pages. The book is illustrated and its contents are full of interest to everyone concerned in the subjects discussed and explained. The constitution and by-laws of the Association are also included, with lists of officers and committees and members. Headquarters are at 111 W. Monroe street, Chicago.

FINANCIAL CORPORATIONS

Ala., Bessemer.—United States Savings Bank, capital \$100,000, is organized and expects to begin business March 1. W. W. Hollingsworth will be Pres. and G. B. Hollingsworth Cash.

Ala., Birmingham.—Coal Creek Investment Co., capital \$30,000, organized with R. D. Johnston, Jr., Pres.; Frank Stevens, V.-P.; C. S. Simmons, Secy. and Treas.

Ark., Ashdown.—First National Bank of Ashdown, which succeeds Little River County Bank, has elected R. E. Major, Pres.; Frank McCann, Cash. (See Manufacturers Record, Jan. 22.)

Ark., Harrison.—Chartered: Harrison Bldg. and Loan Assn.; capital \$500,000. C. L. Gilmes, Pres.; Frank Greene, V.-P.; Lee D. Bell, Secy.; W. S. Pettit, Treas.

Ark., McRae.—McRae State Bank, capital \$10,000, is organized with W. F. Bauer Pres., J. A. Collum V.-P., William Booth Cash.

Ga., Clio.—Farmers and Merchants' Bank has begun business with \$25,000 capital; U. L. Ellzey, Pres.; W. T. Metzger, V.-P.; W. B. Putrell, Cash. (Previously noted.)

Ky., Louisville.—Savings Building and Loan Assn. has filed articles of incorporation; capital \$500,000. Horace G. McPhie will be Secy. Offices will be in the Inter-Southern Life Bldg. Incptrs.: Horace G. McPhie, W. E. Ross, C. Lee Hawkins, C. E. McMahon, S. H. Jacoby, Howard L. Honaker, C. L. Killinger, R. E. Moody, S. M. Long, L. C. Spillman, Thomas L. Cherry, A. V. Thompson, Carl Althaus, E. A. Decker and others.

La., St. Francisville.—First National Bank of St. Francisville has made application to organize; capital \$25,000; stockholders, A. A. Wren, W. McCausland, K. C. Smith, L. H. Dinkins and P. H. Loundres.

Md., Frederick.—Commercial State Bank of Frederick, capital \$80,000 and surplus \$20,000, will begin business July 1 with Casper E. Cline, Pres.; Richard S. J. Dutrow, Cash.; Hammond Clary, Asst. Cash., and Milton G. Urner, Sr., Counsel.

Mo., Barnard.—Farmers and Citizens'

Bank, capital \$30,000, will begin business about Mch. 1; directors, J. R. Turner, M. M. Pollard, J. C. Hooker, R. P. Nelson and R. B. Wilson.

Mo., Joplin.—Connor Investment Co. of Joplin has filed articles of incorporation; capital \$600,000. Shareholders: J. C. O'Connor, T. C. Nolan, Joplin; Katie O'Connor Chadsey, St. Louis; Hanora E. Swartz, Fremont, Ohio; Agnes O'Connor Schmidt, Tiffin, Ohio; W. H. Phelps, Carthage, Mo.

N. C., Brevard.—L. L. Jenkins of Asheville and Brownlow Jackson, Hendersonville, are reported organizing a bank in Brevard.

N. C., King.—Bank of King, recently chartered with \$25,000 capital, has elected following officers: V. T. Griggs, Pres.; S. W. Pulliam, V.-P.; T. S. Petrie of Danbury, Cash.; V. T. Griggs, S. W. Pulliam, Dr. J. Walter Neal of Walnut Cove, M. T. Chilton, N. E. Pepper of Danbury, Will R. Keiger and C. O. Boyles, directors. (Previously mentioned.)

N. C., Knightdale.—Chartered: Knightdale Banking Co., authorized capital \$25,000, \$5000 subscribed; organizers, D. B. Harrison, B. P. Williamson, Jr., and others.

N. C., Lumberton.—Chartered: McLean Trust Co., capital \$125,000. Organizers: A. W. McLean, Margaret F. McLean, A. T. McLean of Lumberton. (This was previously reported under date of McLean, N. C.)

N. C., Mocksville.—B. O. Morris and others are reported interested in a plan to organize a new bank.

N. C., Pilot Mountain.—Bank of Pilot Mountain, authorized capital \$50,000, is authorized to begin business with \$15,000 subscribed. Organizers: I. M. Gordon, Statesville; J. P. Lewis, O. N. Swanson, W. H. Reid, O. A. Davis, McK. R. Smith, P. R. Nelson, S. W. Fulk, H. W. Gordon, Jr., Pilot Mountain; W. R. Mitchell, T. M. Lawson, S. M. Gordon, D. P. Boyles, J. P. Lawson, J. M. Covington, Pinnacle; P. Oliver, King, and others.

N. C., Statesville.—People's Loan and Savings Bank Incptd.; authorized capital \$100,000; business to begin with \$50,000 subscribed. Organizers: Geo. H. Brown, L. C. Wagner, D. F. Jenkins, A. L. Coble, W. A. Thomas, H. F. Long, L. Ashe, Zeb. V. Long, Dewey L. Raymer, Statesville; Osborne Brown, Longisland.

Okla., Fairland.—Bank of Fairland has made application to convert into the First National Bank of Fairland; capital \$25,000.

Okla., Bokoshe.—Approved: First National Bank of Bokoshe, to succeed State Exchange Bank; capital \$25,000.

S. C., Chesterfield.—Chesterfield Loan & Ins. Co. (successor to Chesterfield Realty & Ins. Co.) chartered and incptd. Capital \$7000. Organizers: J. L. Craig and C. C. Douglas, Chesterfield; J. H. Wells, Cheraw, S. C. Business is to begin about March 1.

S. C., Conway.—Chartered: Conway Loan & Trust Co.; capital \$25,000; officers, D. A. Spivey, Pres. and Treas.; J. C. Spivey, Secy.

S. C., Mt. Croghan.—Home Realty & Insurance Co. chartered; capital \$2000. Petitioners, M. L. Raley, Mt. Croghan, and J. O. Raley, Cheraw, S. C.

S. C., Mt. Croghan.—Home Realty & Insurance Co. commissioned; capital \$2000; petitioners, M. L. Raley and J. O. Raley.

S. C., Wagener.—First National Bank (conversion from a State bank) is chartered; capital \$25,000, but it is proposed to increase to \$50,000 at once; surplus \$5000. E. B. Jackson, Pres.; W. A. Whitlock, M.D., V.-P.; W. P. Williams, Cash. Business has begun.

S. C., Salley.—Southern Mercantile Co. commissioned; capital \$5000; petitioners, L. A. Jones and H. O. Jones.

Tenn., Covington.—First National Bank of Covington, capital \$60,000, has organized with following directors: Pres., J. H. Flippin; V.-Ps., A. P. Smith and Alfred Boyd, Jr.; Cash., E. L. Worrell; R. M. Robinson, L. P. Flippin, L. Y. Cobbs, M. A. Ray, L. H. Lowenhaupt, H. K. Templeton, C. P. Boals and C. P. Simonton; B. S. Jamison, Asst. Cash. Business will begin about Mch. 1 in the M. A. Ray Bldg.

Tenn., Cookeville.—Citizens' Bank of Cookeville has begun business; capital \$15,000; H. S. Hargis, Pres.; W. R. Carlen, V.-P.; Col. S. B. Anderson, Cash.

Tenn., Nashville.—Security Trust Co., capital \$10,000, has made application for charter; incptrs., J. D. Andrews, J. C. Morrison, G. F. Cummings, William Hume, Jr., and Walter H. White.

Tenn., New Tazewell.—Citizens' Bank of New Tazewell has made application to convert into the Citizens' National Bank of New Tazewell; capital \$25,000.

Tenn., Russellville.—Conversion of the Citizens' Bank into the First National Bank is approved; capital \$25,000.

Tex., Center.—Chartered: Center Loan Co., capital \$75,000; incptrs., J. S. Kennedy, T. T. Smith and Noble Weaver.

Tex., Dallas.—Western Indemnity Co. is organized with J. H. Pickrell, Pres.; proposed capital to be \$400,000.

Tex., Moran.—First National Bank, capital \$25,000, is organized by T. E. Powell, Baird, Tex.; S. L. Driskill, P. G. Matchett, C. B. Snyder and R. L. Boydston.

Tex., Pittsburg.—Chartered: Pittsburg Building and Loan Assn., capital \$500,000; incptrs., S. R. Greer, L. B. Ress and H. H. Lueddecke.

Tex., Pleasanton.—First State Bank of Pleasanton is authorized to do business; capital \$30,000; W. H. Patton, Pres.; Herschel Cast, Cash.

Tex., San Leon.—Chartered: Home Builders' Investment Co., capital \$10,000. Incptrs.: E. E. Parker, Reuben Bourne and C. S. Woods.

Tex., Victoria.—John L. Ray, Lock Box 137, Victoria, should be addressed regarding the organization of a savings bank in Victoria.

Va., Newmarket.—Citizens' National Bank of Newmarket has made application to organize; capital \$25,000. C. N. Hoover, E. D. Newman, M. B. Wunder, W. W. Williamson and E. W. Newman. This succeeds the Citizens' Bank of Newmarket.

Va., Oak Hall.—Farmers' Bank of Oak Hall, capital \$10,000, is organized with Frank Fletcher, Pres., Jenkins Bridge, Va.; H. S. Miles, Secy., Atlantic, Va.

Va., Richmond.—The Industrial Finance Corp., capital \$6,000,000, is chartered in Virginia. Headquarters of the company will be in New York, but there will be a number of subsidiary and collateral institutions throughout Virginia and other States. Among the directors are Dr. Nicholas Murray Butler, Dr. E. R. L. Gould, W. R. Craig and others of New York; Oliver J. Sands of Richmond, Nathan B. Scott and Frank S. Bright, Washington; Arthur J. Morris, Fergus Reid, H. T. Campbell, T. S. Southgate, Preston S. Cotten, C. H. Ferrell and others of Norfolk; J. R. McAllister, Charlton Yarnall and Louis J. Kolb, Philadelphia, are among the directors. Dr. Gould will be chairman and Arthur J. Morris of Norfolk, Pres.

W. Va., Charles Town.—Charles Town and Ranson Bldg. and Loan Assn., capital \$124,830, incptd. by A. W. McDonald, W. P. Eastery, T. Lee Shively, J. B. Brazier, J. C. Pittman, C. T. Shugart, B. H. Riddleberger, D. A. Phillips and Frank Beckwith of Charles Town and W. A. Higgs of Ranson, W. Va.

NEW SECURITIES

Ala., Lanett.—Voted: \$12,000 5 per cent. 30-year Lanett School Dist. bonds. R. W. Jennings is Mayor.

Ala., Mobile.—City Commrs. have vetoed the resolution providing for an election to vote on \$100,000 auditorium and library bonds. Pat J. Lyon is Mayor.

Fla., Brooksville.—Hernando county will place on the market in March \$200,000 road bonds. Address Clerk Circuit Court.

Fla., Clearwater.—Chicago parties have purchased \$95,000 6 per cent. 20-year Pinellas county school bonds at premium of \$45; Dixie M. Hollins, Supt. of Schools, Pinellas County.

Fla., Coconut Grove.—Election to vote on \$15,000 5 per cent. bonds Coconut Grove Special Tax School Dist. No. 5, Dade county, is to be held Mch. 17; dated Apr. 1, 1914; maturity Apr. 1, 1918, and \$1000 annually thereafter. R. E. Hall, Supt. Board of Public Instruction, Dade county.

Fla., Dunnellon.—Bids received until Feb. 19 for \$12,000 5 per cent. 20-year bonds Dunnellon Special School Tax Dist.; denomination \$1000. Address J. H. Brinson, Secy., Board of Public Instruc. of Marion County, Ocala, Fla.

Fla., Eustis.—Steps are being taken to call an election to vote on bonds for sewers and streets. Address Town Council.

Fla., Mial.—Mch. 9 Miami district will vote on \$150,000 of school bonds. R. E. Hall, Supt. Board of Public Instruction, Dade county.

Fla., Tampa.—Bids will be opened Mch. 3 for \$12,000 6 per cent. school district bonds voted Jan. 23, 1914; denomination \$1000; dated July 1, 1914; maturity: one bond July 1, 1916, and one each year thereafter. Address Marshall Moore, Secy. Board Public Instruction, Hillsborough County.

Ga., Commerce.—T. C. Hardman, Chrmn., Finance Board, is receiving bids for \$16,000 5 per cent. school and sidewalk bonds.

Ga., Dalton.—Murray county will vote Mch. 13 on \$30,000 courthouse and \$15,000 jail bonds. Address County Comms.

Ga., Rome.—Steps are reported being taken to issue bonds for municipal bridge. Address Judge Moses Wright.

Ga., Spring Place.—March 13 Murray county will vote on \$45,000 courthouse and jail bonds. D. A. Dunn, Chrmn., County Commissioners.

Ga., Thomasville.—People's Savings Bank has purchased \$10,000 of an issue of \$20,000 school bonds.

Ga., Tifton.—Mch. 25 election will be held to vote on \$27,000 municipal improvement bonds. Address The Mayor.

Ky., Bowling Green.—The \$300,000 Warren county road bonds to be voted on March 25 are 30-year 4½ per cents. Address County Comms.

Ky., Franklin.—Apr. 13 election is to be held in Simpson county to vote on \$100,000 pike bonds. Address County Comms.

La., Shreveport.—Steps are being taken to call an election to vote on \$1,000,000 municipal water-works bonds. J. H. Eastham is Mayor.

Ky., Taylorsville.—Cutter, May & Co., Chicago, have purchased \$9000 6 per cent. water bonds at \$177 premium. John H. Reid is Mayor.

La., Alexandria.—Cottile Road Dist. No. 1, Rapides parish, voted last November to issue \$30,000 5 per cent. 10-year road-improvement bonds; denomination \$1000, or to suit purchaser; dated Feb. 1, 1914; maturity Feb. 1, 1924. Bonds have not yet been sold. Address Dist. Court.

La., Gretna.—J. Y. Sanders has been awarded at par \$100,000 Dist. No. 1 and \$100,000 Dist. No. 2 5 per cent. Jefferson parish road bonds. Address Police Jury.

La., Oakdale.—Reported voted: \$25,000 high-school bonds. Address School Commissioners.

Md., Centerville.—Bill is to be introduced in the Legislature asking authority to issue \$10,000 street bonds. Address Town Comms.

Md., Kensington.—Town proposes to issue \$50,000 of bonds for local improvements. Address Chrmn. Campbell, Finance Comm.

Miss., Corinth.—Mch. 3 Alcorn county will offer for sale \$50,000 of 5 per cent. 20-year road bonds. O. M. Hinton, clerk. Further particulars will be found in the advertising columns.

Miss., Jackson.—Bill providing for issue of \$1,000,000 6 per cent. 10-year bonds to liquidate State debt was defeated by Senate. (Recently noted.)

Miss., Macon.—Suprs. Dist. No. 1, Noxubee county, is offering for sale \$70,000 5½ per cent. road bonds. John A. Tyson, Clerk. Further particulars will be found in the advertising columns.

Miss., Vicksburg.—Warren county will sell at noon Mch. 3 \$100,000 5 per cent. 40-year road and bridge bonds. Address County Comms.

Mo., Grant City.—Election is about to be held to vote on \$3000 paving bonds. Address Town Comms.

Mo., Kirkwood.—W. R. Compton Bond & Mortgage Co. has purchased at premium of \$2000 plus expenses \$65,000 5 per cent. 20-year school-building bonds voted Jan. 24, 1914; denomination \$1000; dated Feb. 1, 1914; maturity Feb. 1, 1934; C. A. Lawley, Secy., School Commissioners, Kirkwood School Dist.

Mo., LaPlatta.—Election is soon to be held, it is reported, to vote on \$20,000 school district high school bonds. Address Dist. Comms.

N. C., Andrews.—\$150,000 railroad-aid bonds have been voted. Address J. W. Walker, Secy. Hlawassee Ry. Co., Andrews, N. C., or G. H. Haigler, Secy., Haynesville, N. C.

N. C., Asheville.—Voted: \$50,000 water-works and sewer bonds. Address The Mayor.

N. C., Ashboro.—C. C. Crawford, Mayor, may be addressed regarding \$20,000 5 per cent. 30-year water-extension bonds; denomination \$500.

N. C., Chapel Hill.—Question of issuing \$50,000 railroad-aid bonds is reported under consideration. W. S. Roberson is Mayor.

N. C., Clinton.—Security Savings Bank & Trust Co., Toledo, has purchased \$10,000 6 per cent. municipal bonds; A. B. Crumpler, Mayor.

N. C., Graham.—Alamance county has voted \$85,000 railroad-aid bonds. Address County Comms.

N. C., Greensboro.—Election is to be held

to vote on \$300,000 railroad-aid bonds. Address The Mayor.

N. C., Roseboro.—Hanchett Bond Co., Chicago, has purchased \$10,000 school bonds.

N. C., Roseboro.—Hanchett Bond Co., Chicago, has purchased at par \$10,000 5 per cent. 30-year Roseboro Graded School Dist. bonds; denomination \$100 to \$500. Address Jos. M. Hall.

N. C., Mt. Airy.—Stacy & Braun, Toledo, O., have purchased at par \$80,000 5 per cent. 30-year township road bonds. Address Town Comms.

N. C., Yanceyville.—Election is to be held in Caswell county to vote on railroad-aid bonds. Address County Comms.

Okla., Bristow.—The \$25,000 sewer bonds voted last summer have been sold. Address The Mayor.

Okla., Foraker.—Bids will be received at any time for \$25,000 6 per cent. 24-year water bonds. Address The Mayor.

Okla., Henryetta.—Voted: \$25,000 bonds for schools. Feb. 17 election called to vote on \$20,000 water-works bonds. Address The Mayor.

Okla., Okmulgee.—Okmulgee county will vote March 24 on \$110,000 courthouse and jail bonds. Address County Comms.

Okla., Oklahoma City.—An election is to be held in the near future, it is reported, to vote on water-works bonds. Address The Mayor.

Okla., Tulsa.—Election to vote on \$500,000 school bonds will probably be held Feb. 24. Address School Board.

S. C., Allendale.—Allendale township is reported to have made application to the Legislature for authority to issue \$30,000 road-improvement bonds. Address Township Comms.

S. C., Greer.—A. B. Leach & Co., New York, has purchased \$67,000 5 per cent. 20-year light, water and sewer bonds. T. W. White is Clerk and Treas.

S. C., St. George.—Bids will be received until 11 A. M. Feb. 25 for \$2500 6 per cent. 10-year bonds Burns School Dist. No. 22, Dorchester county. Address J. Otey Reed, Atty. D. M. Fogle, J. C. Aull and T. V. Campbell are trustees of said district.

S. C., Mt. Pleasant.—Election is to be held in June to vote on \$18,000 6 per cent. 20-year water-works bonds; denomination probably \$100. R. V. Royall, Mayor.

Tenn., Athens.—An ordinance has been introduced in the City Council authorizing an issue of \$30,000 30-year street-improvement bonds. Address The Mayor.

Tenn., Columbia.—Election is soon to be held to vote on high-school bonds. Address The Mayor.

Tenn., Covington.—Covington Savings Bank & Trust Co. is reported to have purchased for Weil, Roth & Co., Cincinnati, \$70,000 5 per cent. Tipton county bonds; \$45,000 for funding floating debt and \$25,000 for building bridges. Address Judge S. E. Stephenson.

Tenn., Fayetteville.—An election will probably soon be held to vote on \$60,000 sewerage bonds. Address The Mayor.

Tenn., Pulaski.—The \$12,500 of school bonds to be voted on Mch. 21 are 5 per cent.; dated July 1, 1914; maturity, \$500 due 5 years from date of issue and \$500 at the end of each year thereafter; H. F. Wheeler, Mayor; T. P. Holt Recorder.

Tenn., Sevierville.—Spitzer, Borick & Co., Chicago, have purchased at par \$185,000 5 per cent. 20-year Sevier county road bonds; denomination \$1000; dated April 1, 1913; maturity April 1, 1933. H. C. Butler, Chrmn., Pike Comms.

Tenn., Union City.—Obion River Drainage Dist. No. 1, Obion county, is asking bids until Feb. 21 for \$281,000 6 per cent. 1-20-year bonds. Address J. A. Coble, Secy. Board of Directors.

Tex., Austin.—The Attorney-General has approved the following securities: \$1,325,000 4½ per cent. sewer, city hall, school and park improvement bonds, Beaumont; \$500,000 5 per cent. 20-40-year Beaumont water-works bonds.

Tex., Ballinger.—Runnels county is reported considering question of issuing \$100,000 road bonds. Address County Comms.

Tex., Beaumont.—Mch. 10 election is to be held in Jefferson county to vote on drainage bonds; \$200,000 for Hillebrandt Bayou Dist. No. 5 and \$85,000 McFaddin Dist. No. 4. Address County Comms.

Tex., Big Wells.—Voted: \$20,000 school-building bonds. Address The Mayor.

Tex., Burnet.—Voted: Burnet county bridge bonds. Address County Comms.

Tex., Bronson.—Voted: \$12,000 independent school district bonds. Address School Board.

Tex., Clarendon.—E. H. Powell, City Secy., will receive bids at any time for \$16,000 5 per cent. water-works bonds; dated June 1, 1913; maturity June 1, 1933; optional after June 1, 1923; denomination \$1000.

Tex., Corpus Christi.—Mch. 14 election is to be held in Nueces county to vote on \$165,000 causeway bonds. Address County Commissioners.

Tex., El Paso.—Voted: \$150,000 water-works improvement and \$100,000 sewer extension bonds. Address The Mayor.

Tex., Gatesville.—Road Dist. No. 1, Coryell county, will soon vote on \$75,000 bonds. Address County Comms.

Tex., Hillsboro.—Feb. 21 election is to be held in Hill county to vote on \$150,000 Dist. No. 2 road bonds. Address County Comms.

Tex., Hillsboro.—Bids were received until 5 P. M. Feb. 17 by M. W. Lovell, Mayor, for \$25,000 5 per cent. 15-40-year school bonds.

Tex., Houston.—Harris County Navigation Dist. will, it is reported, soon place on the market \$250,000 5 per cent. 40-year bonds; denomination \$1000.

Tex., Jayton.—State of Texas has purchased \$12,000 5 per cent. 40-year Jayton Independent School Dist. bonds; denomination \$1000; dated July 10, 1913.

Tex., McKinney.—The \$75,000 high school and \$75,000 street-improvement bonds recently purchased by the Collin County National Bank, McKinney, Tex., are 40-year 5 per cents.; dated Feb. 1, 1914; maturity Feb. 1, 1954; denomination \$1000. H. A. Finch, Mayor.

Tex., McKinney.—March 14 McKinney Dist., Collin county, will vote on \$65,000 road bonds. Address County Comms.

Tex., McKinney.—Feb. 21 following districts in Collin county will vote on good-roads bonds: Farmersville, \$290,000; Celina, \$125,000; Princeton, \$100,000; Prosper, \$190,000; Cullcooka, \$65,000. Address County Comms.

Tex., Pilot Point.—Voted: \$14,000 water-works bonds. Address The Mayor.

Tex., Poteet.—Bids were received until 6 P. M. Feb. 18 for \$16,000 5 per cent. 10-40-year bonds of Poteet Independent School Dist.; J. L. Vining, Prest. School Board.

Tex., Tarkington Prairie.—Liberty county has purchased at par and interest \$8000 5 per cent. 5-40-year Tarkington Prairie School Dist., Liberty county, building bonds.

Tex., Victoria.—Mch. 18 election is to be held in Victoria county to vote on \$125,000 Dist. No. 5 public highway bonds. Address County Comms.

Tex., Waco.—Voted: \$1,075,000 5 per cent. 40-year Justice Precinct No. 1 and 2, McLennan county, road bonds. Address County Comms.

Tex., Woodsboro.—Woodsboro Independent School Dist., Refugio county, will vote on \$9000 school bonds. Address County Commissioners, Refugio.

Tex., Yoakum.—Mch. 18 city will vote on \$72,000 of bonds as follows: Street improvements, \$40,000; school buildings, \$30,000; municipal incinerating plant, \$2000. Address The Mayor.

Tex., Yorktown.—First State Bank of Yorktown has purchased \$80,000 city hall bonds. Address The Mayor.

Va., Ashland.—Feb. 26 election is to be held to vote on \$40,000 water and sewer bonds. Address Town Council.

Va., Richmond.—Board of Aldermen has adopted ordinance providing for the issuing of \$1,500,000 4 per cent. 34-year permanent public improvement bonds. Ordinance is also to be prepared providing for the issuing of \$50,000 short-term bonds for street improvements.

Va., Lovingsston.—Weil, Roth & Co., Cincinnati, have purchased at \$33 premium \$35,000 5 per cent. bonds Massles Mill Magisterial Road Dist., Nelson county, road-improvement bonds. E. L. Kidd is County Clerk.

Va., Stuart.—March 24 election is to be held to vote on \$6000 water and \$4000 sewer 6 per cent. 30-year bonds. F. P. Burton is Mayor.

Va., Virginia Beach.—Bids were received until noon Feb. 16 for \$4000 6 per cent. bonds. B. P. Holland, Mayor.

W. Va., Huntington.—Cabell county will, it is reported, probably issue \$100,000 road-repair bonds. D. L. Smith is Prest. County Court.

W. Va., Princeton.—Bids will be received until 1 P. M. Mch. 9 for \$500,000 5 per cent. 10-30-year Mercer county road bonds. C. R. McNutt, Prest. Mercer County Court. Further particulars will be found in the advertising columns.

FINANCIAL NOTES

Bank of Aberdeen, at Aberdeen, N. C., has filed charter changing its name to the Page Trust Co.

Lafayette Bank, St. Louis, Mo., has authorized increase in capital from \$100,000 to \$200,000.

Commercial Savings Bank, Charleston, S. C., has decided to change its name to the Commercial National Bank.

Merchants and Farmers' Bank, Cheraw, S. C., is authorized to increase capital from \$30,000 to \$125,000.

First Savings Bank & Trust Co., according to reports from Nashville, Tenn., has purchased the Bank of West Nashville.

Reports from San Antonio, Tex., state that the American Bank & Trust Co. and the West Texas Bank & Trust Co. have merged under the name of the latter institution.

Farmers & Merchants' Bank of Stanley, N. C., has filed amendment to its charter providing for the establishment of a branch bank in Denver to be known as the Denver Branch of the Farmers & Merchants' Bank of Stanley.

A condensed statement of 583 State banks in Oklahoma at close of business Jan. 13, 1914, shows loans and discounts, \$32,793,566; due from banks, \$11,848,116; cash in banks, \$3,112,818; capital stock, \$8,627,250; surplus fund, \$1,232,689; undivided profits, \$774,571; due to banks, \$2,520,739; individual deposits, \$43,326,540; total resources, \$58,170,148.

At the annual meeting of the Florida Association of Life Underwriters, held at Tampa, the following officers were elected for the ensuing year: F. F. Wooten, Prest.; V. P., J. Will Gardner, DeLand; 2d V. P., F. A. Broadnax, Jacksonville; Secy. and Treas., Dr. S. L. Lowry, Tampa; Asst. Secy., O. L. Hopkins, Tampa; Exec. Com., F. F. Wooten, A. C. Harlee, D. E. Richardson, R. Jeter Jones, Jacksonville, Walter Platt.

A condensed statement of 849 State banks and bank and trust company in Texas at close of business Jan. 13, 1914, shows loans and discounts, personal or collateral, \$76,365,281; loans, real estate, \$12,195,451; due from banks and bankers, subject to check, \$26,297,253; capital stock, \$33,621,500; surplus fund, \$7,162,272; undivided profits, net, \$3,862,006; due to banks and bankers, subject to check, \$7,632,525; individual deposits, subject to check, \$79,697,069; time certificates of deposit, \$7,863,017; demand certificates of deposit, \$441,007; total resources, \$149,636,561.

FROM A FEW OF OUR READERS

Illustrating the Divers Uses of the Columns of the Manufacturers Record.

Among the letters received by the MANUFACTURERS RECORD from many quarters and on divers subjects every week are many throwing a strong light upon the practical uses to which its columns are put. In the last few days a number of typical ones have been received. In subscribing in the name of the city of Austell, Ga., Mayor C. J. Shelverton writes:

"For several years I served this city as Mayor, and tendered my resignation to connect myself with the inspection service of the Isthmian Canal Commission, which position I resigned on December 1, 1913, and after my return to this city I received the nomination as Mayor and was elected on December 8. During my former administration I always received your paper, and I now feel at a loss without it to give me the industrial activity of the country at large, and I feel that it is very essential to any municipality who desires to bid for manufacturing plants.

"I represent a city that is coming forward very rapidly, having just installed electricity throughout the city and just passed an issue for \$25,000 for the erection of water-works and sewerage, which will be commenced during the present year. Besides this, the J. B. McCrary Company has erected one of the best power plants on the famous Sweetwater Creek, within four miles of Austell, and will place 5000 horse-power for use of manufacturing industries, and we will make a long and hard pull for the manufacturing plants.

(Continued on Page 76.)

Merchants-Mechanics National Bank
 South and Water Sts. BALTIMORE MD
 DOUGLAS H. THOMAS President.
 JNO. B. RAMSAY V-P and Chm Bd of Dir
 WM. INGLE Vice-President.
 JOHN B. H. DUNN Cashier.
 Capital \$2,000,000 Deposits \$21,670,000
 Surplus and Profits \$2,175,000
 Accounts of Banks, Bankers, Corporations and Individuals solicited.
 We invite correspondence.

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 Railroad Securities**
 DEALT IN
F. J. LISMAN & CO.
 Specialists in Steam R. R. Securities
 Members New York Stock Exchange
 30 Broad Street NEW YORK
 39 Pearl Street, Hartford
 1 and Title & Trust Bldg. Philadelphia

Delaware Trust Company
 Wilmington, Delaware
 INCORPORATING under broad, liberal, safe and stable Delaware laws. A fully equipped department for proper organization and registration of corporations.
 BANKING AND TRUST department gives special attention to out of town customers' accounts.
 TITLE DEPARTMENT examines and guarantees title to realty throughout Delaware.
 REALTY DEPARTMENT has sites for manufacturing industries. Modern Methods of management of property.
 J. ERNEST SMITH, President and Gen. Counsel.
 WM. G. TAYLOR, Vice-Pres. and Treasurer.
 HARRY W. DAVIS, Vice-Pres. and Secretary.
 W. W. PUSEY 2d, Title and Real Estate Officer.

The First National Bank
 OF KEY WEST, FLA.
 United States Depository and Disbursing Agent
 Capital \$100,000
 Surplus and Undivided Profits 40,000
 A general banking business transacted
 Special attention given to collections

**INVESTMENT
 SECURITIES**
 Southern Stocks and Bonds
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 Cotton Mill Stock a Specialty
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**THE PROVIDENT SAVINGS BANK
 & TRUST CO.**
 CINCINNATI OHIO

JOHN NUVEEN & CO.
 First National Bank Building
 CHICAGO
 We purchase SCHOOL, COUNTY and MUNICIPAL BONDS. Southern Municipal Bonds a Specialty.
 Write us if you have bonds for sale.



19,428 Manufacturers

alone, of the 300 lines of business, use Burroughs Bookkeeping Machines to get figure facts about their costs, sales and general business.

They could not afford to pay the cost of getting so many facts—if they had to get them by hand.

Burroughs machines save them money; save them worry; prevent mistakes in their business.

We'll gladly demonstrate these facts to any manufacturer—big or little—anywhere, any time, without cost or obligation.

Burroughs Adding Machine Co.
 80 Burroughs Block, Detroit, Michigan

The First National Bank
 17 South St., Baltimore, Md.
 Capital, - - - \$1,000,000
 Surplus and Net Profits, 450,000
 Deposits, - - - 8,500,000
 Especially well equipped to handle the business of Southern Banks, Corporations, Individuals and Manufacturers. We cordially invite correspondence and interviews.

The National Exchange Bank
 OF BALTIMORE, MD.
 Hopkins Place, German and Liberty Streets
 Capital, \$1,000,000
 August 9th, 1913, Surplus and Profits, \$764,091.00
 OFFICERS
 WALDO NEWCOMER, President.
 SUMMERFIELD BALDWIN, Vice-Pres.
 R. VINTON LANSDALE, Cashier.
 C. G. MORGAN, Asst. Cashier.
 Accounts of Mercantile Firms, Corporations, Banks, Bankers and Individuals Invited.

Edwin Warfield, President
**Fidelity and Deposit Company
 of Maryland**
 Home Office: Baltimore
 Total Assets over \$11,000,000.00
 All Kinds and Classes of Surety Bonds and Casualty Insurance

Largest and Strongest Surety and Casualty Company in the World

FIRST NATIONAL BANK
 RICHMOND, VIRGINIA
 Capital and Surplus, - - \$3,000,000
 JNO. B. PURCELL, President
 JNO. M. MILLER, Jr., Vice-Pres.
 W. M. ADDISON, Cashier

GO SOUTH!
 FOR SALE Timber, Coal, Iron, Ranch and Other Properties
 Southern States, West Indies, Mexico
SOUTHERN STATES DEVELOPMENT CO.
 (Brokers) Geo. B. Edwards, Pres.
 Tribune Building NEW YORK, N. Y.
 Confidential Negotiations, Investigations, Settlements, Purchases of Property

**WE BUY
 MUNICIPAL BONDS**
 FROM
 Municipalities and Contractors
BREED, ELLIOTT, & HARRISON,
 First Natl. Bank Bldg., CINCINNATI, OHIO

WE BUY
 CITY, COUNTY, SCHOOL
 AND DRAINAGE
BONDS
 From Municipalities
 and Contractors
The Tillotson & Wolcott Co.
 CLEVELAND, OHIO

Young & Selden Co.

BALTIMORE, MD.

DESIGNERS

AND

LITHOGRAPHERS

OF

High-Class Stationery

FOR

Banks, Mills and Commercial Houses

We Finance
 Electric Light, Power and Street Railway Enterprises
 With Records of Established Earnings

We Offer

Bankers and Investment Dealers
 Proven Public Utility Securities
 Correspondence Solicited

Electric Bond and Share Company

(Paid-up Capital and Surplus, \$12,000,000)

71 Broadway New York



Palmetto National Bank

COLUMBIA, S. C.

Capital
 \$250,000.00

Deposits
 \$2,700,000.00

Surplus and Profits
 \$150,000.00

WILIE JONES, President
 JOHN JACOB SEIBELS,
 Vice-President
 THOMAS TAYLOR
 2nd Vice-President

J. P. MATTHEWS, Cashier
 WM. M. GIBBS, Jr.,
 Asst. Cashier
 WESTON & AYCOCK,
 Solicitors

Direct daily connection with every banking point in South Carolina.

COTTON YARNS

Paulson, Linkroom & Co.

COMMISSION MERCHANTS

NEW YORK
 87-89 Leonard Street

PHILADELPHIA
 120 Chestnut Street

CHICAGO
 206 S. Market Street

We Buy City, County School and Drainage BONDS

FROM MUNICIPALITIES OR CONTRACTORS

We are in position to pay HIGHEST PRICES. Write or wire us your offerings.

The New First National Bank, Assets, \$6,000,000 Columbus, Ohio

Capital for Southern Industries

Peabody, Houghteling & Co.

(Established 1865)

10 So. La Salle Street

CHICAGO, ILLINOIS

To Manufacturers and Capitalists

Contemplating the Establishment of Industrial Enterprises

Attention is called to the exceptionally favorable location of

NEWPORT NEWS, VA.

on Hampton Roads, fifteen miles from the sea. Deep water, railway and sea transportation facilities unrivaled. Climate salubrious. Apply to

W. B. LIVEZEY, President

OLD DOMINION LAND COMPANY
 NEWPORT NEWS, VA.

ESTABLISHED 1884

State, City and Corporation Securities Purchased Direct or from Holders.

Temporary Loans Arranged on Such Collateral.

Deposits, Dec. 31, 1912 9,132,372.15 Increase, \$1,970,862.54
 Dec. 31, 1913 11,103,234.69

WE PAY 3% INTEREST SUBJECT TO CHECK

Largest Capital and Surplus of any financial institution in Maryland or south of Washington, D. C.

MERCANTILE TRUST & DEPOSIT CO.
 OF BALTIMORE

A. H. S. POST, President
 FRED G. BOYCE, Vice-President
 JOHN McHENRY, Treasurer

WILTON SNOWDEN, Vice-President
 J. R. WALKER,

chinery to take up each kilowatt brought to us over the wires.

"As a business man and native of the South, I fully appreciate the great work you are doing, and have done for so many years, and I wish you continued success."

V. M. Cooper, sales manager of the Merry Steel Truck Co. of Augusta, Ga., writes:

"We regard the MANUFACTURERS RECORD very highly, and make constant use of it to assist us in locating new sawmill plants as prospects for sales of our all-steel lumber trucks.

"We value the MANUFACTURERS RECORD particularly because the information obtained therefrom has proven to be exceptionally reliable as regards the style of firm, officers of same and nature of information contained in the item.

"We find that our salesmen are seldom misdirected when acting upon information received from your columns, and we have secured a great many of our best prospects by careful reading of your 'Construction Department,' and believe that every manufacturer in the South would profit by a careful, systematic perusal of your paper."

Commissioner of Agriculture W. A. McRae, Tallahassee, Fla., writes

"The MANUFACTURERS RECORD grows better and greater with every year, and we wish it abundant success."

Referring to the Classified Opportunities Department, W. E. Randle, Jr., secretary-treasurer the Randle Machinery Co., Cincinnati, O., writes:

"Our advertising in this department has greatly exceeded our anticipated results; in fact, we found the small advertisement we have been carrying with you for the past few years so profitable that same is now quite indispensable. We consider your paper the best medium circulated throughout the South, and feel confident many other firms have the same view we have in this respect."

R. C. Scott, secretary Morris Machine Works, Baldwinville, N. Y., writing of the Daily Bulletin, says

"We receive these Daily Bulletins regularly, and look them over carefully every day for items of interest, and find them very useful."

H. G. Meyer, machinery for textile mills, Charlotte, N. C., expressing pleasure in recommending the MANUFACTURERS RECORD to advertisers, says:

"I have found it the best advertising medium covering the Southern field."

Hilburn Brothers Manufacturing Co., Wichita Falls, Tex., in subscribing for three years, says:

"We are getting the magazine regularly now, and like it better all the time."

Charles D. McKinney of Decatur, acting secretary-manager of the Georgia Chamber of Commerce, writes:

"We could not think of doing without your valuable publication. It is indispensable to a properly organized and conducted Chamber of Commerce."

O. F. Moats, Austin Manufacturing Co., Chicago, Ill., writes regarding the Daily Bulletin:

"The writer will state that he has filled the position of sales manager for the Austin Manufacturing Co. for 15 years, and that information of this character appearing in your Daily Bulletin is of the most reliable and authentic character by far that has ever been received at our office."

J. Waldo Whitaker township clerk, Enfield, N. C., writes:

"Our board were very much pleased with sale of bonds, which brought premium of \$1803, and in which you aided us so much in selling."

Mark B. Wunder, county clerk, Shenandoah county, Woodstock, Va., writes:

"Enclosed you will find our county

treasurer's check to pay for our advertisement for bids on road machinery in the MANUFACTURERS RECORD of January 29. I did not let you insert it the second time because the single insertion brought more responses than I had the time to answer. We received some 18 or 19 bids, and have bought the desired outfit."

Durham's Electric Slogan.

[Special Cor. Manufacturers Record.]
Durham, N. C., February 10.

Several months ago the Commercial Club of Durham fostered a contest to secure a suitable electric slogan. "Renowned the World Around" was the winner. The Durham Traction Co., as the result of the activities of the Commercial Club, offered not only to construct a sign to exploit the slogan, but to furnish electricity and maintain the sign indefinitely. The offer was accepted, the sign was constructed, and just before Christmas at a largely attended celebration the Commercial Club officially for the Traction Company turned over this gift to the city of Durham. It cost approximately \$1800, and is on top of a three-story building. It is 32x42 feet in size, and is illuminated by 1287 five-watt mazda lamps.

Roy G. Booker.

Wants a Brick Plant.

Secretary J. L. Beard of the Commercial Club of Cushing, Okla., will be glad to get in touch with persons seeking locations for a brick plant and a machine shop which Cushing would like to have. Secretary H. Askin of the Electric Light & Power Co. of Cushing writes that there is plenty of A1 shale for making paving brick and abundant natural gas at 4 cents per thousand feet from seven gas sands. The main streets of Cushing are to be paved. The city has a population of 4008. Of 1000 gas wells drilled in one year in that field, only three were dry holes.

To Utilize all Facilities.

The S. R. Biggs Iron & Motor Co. of Williamston, N. C., writes to the MANUFACTURERS RECORD:

"Our time from October to July is taken up in the manufacture of harrows, carts, wagons and tobacco flues. During the months of July, August and September we are practically at a standstill. We are looking up some article that we can make during those months, to be made of iron or wood, or both, something we can find a regular man for and carrying a fair margin of profit. Can you suggest something?"

Georgia's Industrial Opportunities.

Macon, Ga., February 3.

Editor Manufacturers Record:

Your attention has no doubt been called to the unequalled opportunities that only await the investor in the South, but now we want to call your particular attention to the wasted opportunities in central Georgia.

There are vast deposits of kaolin, bauxite, fuller's earth, pipe clay, as well as brick and other clays of like nature, that can be mined and manufactured at a tremendous profit to the manufacturer. By actual test the bleaching qualities of some of our fuller's earth that we have had tested show that they are far superior to the English earths that are imported here. Our kaolin is second to none. Our bauxite runs from 40 to 60 per cent. Fire tests with our fire-brick have shown them to be of the very highest quality. Some of our finer clays were taken to Cincinnati to one of the potteries there, and it was worked up and made into as fine vases, according to the superintendent's report, as have ever been made in the factory.

The water-powers of our State are in

their infancy now. There are plenty of streams that if they were properly managed would give abundant power to some manufacturing plant and supply a good many of the towns around us.

We need more factories around us to use the raw material from our hardwood forests. Any of our railroads will be glad to co-operate with any legitimate manufacturing concern that wishes to locate in our territory.

The farming industry in this and the Southern part of our State is just beginning to wake up to the possibilities that await the scientific cultivation of our lands. The papers and the railroads have been advertising the West as the great alfalfa lands of the nation. We can cut about six tons per acre here without irrigation. How much we could cut with irrigation has never been tried, but those who have tried irrigation in truck farming are now urging us that if irrigation is good for truck farming, why not for alfalfa?

Lands throughout the middle West are selling at from \$150 to \$300 per acre for good farm lands. We can sell good farm lands that you can work 12 months in the year at from \$25 to \$50 per acre that will produce more cash money per acre than the higher-priced lands above referred to.

Let the people come and investigate what we have, and if they are any judges of land, they will say, as others have said who have dealt in lands from Maine to California, that our lands are as good as any they have seen, and that the only thing that they could see that has kept them off of the market is that people were afraid to come and see them, for they could not understand why lands that have only sold for \$25 to \$50 an acre were not priced higher. There is a gentleman here now whose home is in Michigan who has dealt in farm lands throughout the middle West, and he is now calling in all his money invested in that territory and has already invested fully \$1,000,000 in Central Georgia, and says that he only wishes he had more to put in the same channel. All we ask is that the investors come and see and be convinced. R. C. Houser.

For Southern Meat Packing.

Asheville, N. C., February 7.

Editor Manufacturers Record:

I note with exceeding interest your article on cattle breeding in Mississippi in your issue of 5th inst., and also your article calling attention to possibilities in regard to the establishment of local packing plants in the South, in the same issue. I sincerely trust both these articles will receive the attention they most certainly merit from all having at heart the building up of this great Southland.

I do not know of any one thing that will tend to press home to the farmer the advantage of selling the product of his farm in the shape of livestock—hogs, cattle or sheep—more than the establishment in his neighborhood of a packing plant. It has been proven year after year in Illinois, Iowa, Indiana, Missouri and the middle Western States that raising hogs on corn grown on the same land brings a bigger bunch of money at one time into the hands of the farmer; is the easiest way of disposing of his crop, and at the same time gives back to the land more than it takes away from it to produce the corn, and this really is the pivot of successful farming. But there is also the saving of the waste now going on in paying the freight on livestock to the large packing centers, and on the finished product thence back to the Southern consumer, with the possibility of lower prices to the consumer, which are not possible now in the face of the tacit understanding as to price main-

tenance in force among the existing packing interests.

North Carolina, or, at any rate, this western part of the State, is not a corn-producing section as compared with the central Western States, nevertheless, by intensive culture more corn can be and is being produced on one acre of land than is being realized on five acres in the section used as a comparison—and better corn, too, while, using the balanced ration, hogs of far superior quality are being raised, and the danger of cholera is very slight, owing to the magnificent climate. I have little doubt that if a packing plant were established at or near Savannah, Wilmington or some other point on the Atlantic or Gulf coast, it would prove a tremendous stimulus to farming interests throughout the entire South, and keep in our territory the profits we are bestowing upon other sections, at the same time ensuring to consumers the choicest cuts, which at present are diverted to more favored markets.

The Western packers are quick to realize that, owing to no Government restrictions being placed upon the movement of North Carolina stock, it is to their advantage to contract in the early spring for all our cattle and sheep, and we contract with them through this mountain region at the low prices then prevalent and ship the finished cattle in the fall, often taking considerable loss as a consequence. We have no tick in this section, and the cattle and sheep-raising possibilities have hardly been scratched yet. There are thousands upon thousands of acres specially adapted to sheep raising lying unused, which, with the advent of a local packing plant, would soon be used to good advantage.

I heartily and sincerely hope that the publicity you are giving this matter may be productive of some good and awaken interest locally before the ground is exempted by the large interests, whose advent would in no wise give relief from present exorbitant prices, though it would undoubtedly stimulate stock raising, but I want to see the South deriving the profits from developing its own industries as a stimulus to further development along other lines. J. W. DUNN.

SOUTHERN RAILWAY COMPANY.
30 Church Street, New York, February 13, 1914.
A DIVIDEND OF TWO AND ONE-HALF PER CENT. (2½%) HAS BEEN DECLARED ON THE PREFERRED STOCK OF THIS COMPANY, payable on Friday, April 24, 1914, to stockholders of record at the close of business Saturday, March 28, 1914.

F. S. WYNN, Secretary.

15 Broad Street, New York, February 13, 1914.
On April 24, 1914, the Voting Trustees for Preferred Stock Trust Certificates of the Southern Railway Company, WHICH HAVE ASSSENTED TO THE EXTENSION AGREEMENT OF AUGUST 27, 1912, will be present to distribute the above dividend of two and one-half per cent. (2½%) when received by them, among the parties entitled thereto, as same appear of record on their books at the close of business March 28, 1914.
J. P. MORGAN & CO.,
Agents for Voting Trustees.

OFFICE OF THE NORTHERN CENTRAL RAILWAY COMPANY.
Baltimore, Md., 12th February, 1914.
The Annual Meeting of the Stockholders of this Company will be held at 12 o'clock noon, on Thursday, the 26th day of February, 1914, at the General Office, southeast corner of Calvert and Centre Streets, Baltimore, when the Annual Report of the President and Board of Directors for 1913 will be presented, an election held for twelve Directors to serve for the ensuing year, and such other business transacted as may properly come before the meeting.
LEWIS NEILSON,
Secretary.

Partner Wanted

With small capital to take interest in machine shop; a blacksmith accustomed to general work. References required.

T. C. GATTI, Pascagoula, Miss.

1906 1914
GLAUCUS A. BRYANT
Civil Engineer and Surveyor
Water, Sewers, Streets, Good Roads, Drainage, Railroads, Real Estate, Topographical Surveys, Town and County Maps, etc. Estimates or contracts made for engineering and surveying.
Capable assistants and organization
Municipal Building WILSON, N. C.